ONKYO®

Stereo Receiver

TX-8555

Instruction Manual

Thank you for purchasing an Onkyo Stereo Receiver.
Please read this manual thoroughly before making connections and plugging in the unit.
Following the instructions in this manual will enable you to obtain optimum performance and listening enjoyment from your new Stereo Receiver.
Please retain this manual for future reference.

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En

WARNING:
TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPARATUS TO RAIN OR MOISTURE.

CAUTION:
TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

Important Safety Instructions

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer’s instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.

PORTABLE CART WARNING

S3125A

13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
15. Damage Requiring Service
    Unplug the apparatus from the wall outlet and refer servicing to qualified service personnel under the following conditions:
    A. When the power-supply cord or plug is damaged,
    B. If liquid has been spilled, or objects have fallen into the apparatus,
    C. If the apparatus has been exposed to rain or water,
    D. If the apparatus does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the apparatus to its normal operation,
    E. If the apparatus has been dropped or damaged in any way, and
    F. When the apparatus exhibits a distinct change in performance this indicates a need for service.
16. Object and Liquid Entry
    Never push objects of any kind into the apparatus through openings as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock.
    The apparatus shall not be exposed to dripping or splashing and no objects filled with liquids, such as vases shall be placed on the apparatus.
    Don’t put candles or other burning objects on top of this unit.
17. Batteries
    Always consider the environmental issues and follow local regulations when disposing of batteries.
18. If you install the apparatus in a built-in installation, such as a bookcase or rack, ensure that there is adequate ventilation.
    Leave 20 cm (8") of free space at the top and sides and 10 cm (4") at the rear. The rear edge of the shelf or board above the apparatus shall be set 10 cm (4") away from the rear panel or wall, creating a flue-like gap for warm air to escape.

Precautions

1. **Recording Copyright**—Unless it's for personal use only, recording copyrighted material is illegal without the permission of the copyright holder.
2. **AC Fuse**—The AC fuse inside the unit is not user-serviceable. If you cannot turn on the unit, contact your Onkyo dealer.
3. **Care**—Occasionally you should dust the unit all over with a soft cloth. For stubborn stains, use a soft cloth dampened with a weak solution of mild detergent and water. Dry the unit immediately afterwards with a clean cloth. Don't use abrasive cloths, thinners, alcohol, or other chemical solvents, because they may damage the finish or remove the panel lettering.
4. **Power**
   WARNING
   BEFORE PLUGGING IN THE UNIT FOR THE FIRST TIME, READ THE FOLLOWING SECTION CAREFULLY.
   AC outlet voltages vary from country to country. Make sure that the voltage in your area meets the voltage requirements printed on the unit's rear panel (e.g., AC 230, 50 Hz or AC 120 V, 60 Hz).

   The power cord plug is used to disconnect this unit from the AC power source. Make sure that the plug is readily operable (easily accessible) at all times.

   Some models have a voltage selector for compatibility with power systems around the world. Before you plug in such a model, make sure that the voltage selector is set to the correct voltage for your area.
   Pressing the [ON/STANDBY] button to select Standby mode does not fully shutdown the unit. If you do not intend to use the unit for an extended period, remove the power cord from the AC outlet.
5. **Preventing Hearing Loss**
   Caution
   Excessive sound pressure from earphones and headphones can cause hearing loss.
6. **Batteries and Heat Exposure**
   Warning
   Batteries (battery pack or batteries installed) shall not be exposed to excessive heat as sunshine, fire or the like.
7. **Never Touch this Unit with Wet Hands—**Never handle this unit or its power cord while your hands are wet or damp. If water or any other liquid gets inside this unit, have it checked by your Onkyo dealer.
8. **Handling Notes**
   - If you need to transport this unit, use the original packaging to pack it how it was when you originally bought it.
   - Do not leave rubber or plastic items on this unit for a long time, because they may leave marks on the case.
   - This unit's top and rear panels may get warm after prolonged use. This is normal.
   - If you do not use this unit for a long time, it may not work properly the next time you turn it on, so be sure to use it occasionally.

For U.S. models

FCC Information for User

CAUTION:
The user changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE:
This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.
This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

For Canadian Models

NOTE: THIS CLASS B DIGITAL APPARATUS COMPLIES WITH CANADIAN ICES-003.
For models having a power cord with a polarized plug:
CAUTION: TO PREVENT ELECTRIC SHOCK, MATCH WIDE BLADE OF PLUG TO WIDE SLOT, FULLY INSERT.

Modèle pour les Canadien

REMARQUE: CET APPAREIL NUMÉRIQUE DE LA CLASSE B EST CONFORME À LA NORME NMB-003 DU CANADA.
Sur les modèles dont la fiche est polarisée:
ATTENTION: POUR ÉVITER LES CHOCS ÉLECTRIQUES, INTRODUIRE LA LAME LA PLUS LARGE DE LA FICHE DANS LA BORNE CORRESPONDANTE DE LA PRISE ET POUSSER JUSQU'AU FOND.

For British models

Replacement and mounting of an AC plug on the power supply cord of this unit should be performed only by qualified service personnel.

IMPORTANT

The wires in the mains lead are coloured in accordance with the following code:

Blue: Neutral

Brown: Live

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

The wire which is coloured blue must be connected to the terminal which is marked with the letter N or coloured black.

The wire which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red.

IMPORTANT

The plug is fitted with an appropriate fuse. If the fuse needs to be replaced, the replacement fuse must approved by ASTA or BSI to BS1362 and have the same ampere rating as that indicated on the plug. Check for the ASTA mark or the BSI mark on the body of the fuse.

If the power cord's plug is not suitable for your socket outlets, cut it off and fit a suitable plug. Fit a suitable fuse in the plug.

For European Models

Declaration of Conformity

We, ONKYO EUROPE ELECTRONICS GmbH
LIEGNITZERSTRASSE 6,
82194 GROEBENZELL,
GERMANY

CE

declare in own responsibility, that the ONKYO product described in this instruction manual is in compliance with the corresponding technical standards such as EN60065, EN55013, EN55020 and EN61000-3-2, -3-3.

GROEBENZELL, GERMANY

K. MIYAGI

ONKYO EUROPE ELECTRONICS GmbH

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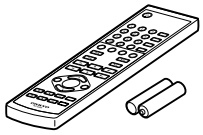
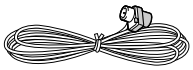
Supplied Accessories

Make sure you have the following accessories:



Remote controller and two batteries (AA/R6)



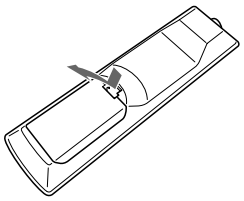
Indoor FM antenna

AM loop antenna

* In catalogs and on packaging, the letter at the end of the product name indicates the color. Specifications and operation are the same regardless of color.

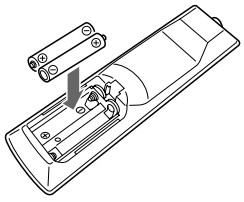
Installing the Batteries

1 **Detach the battery cover by pressing the tab and pulling up the cover.**

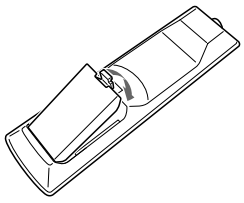


2 **Insert two AA-size batteries into the battery compartment.**

Carefully follow the polarity diagram (positive + and negative - symbols) inside the battery compartment.



3 **After batteries are installed and seated correctly, attach the compartment cover.**



Notes:

- If the remote controller doesn't work reliably, try replacing the batteries.
- Don't mix new and old batteries or different types of batteries.
- If you intend not to use the remote controller for a long time, remove the batteries to prevent damage from leakage or corrosion.
- Expired batteries should be removed as soon as possible to prevent damage from leakage or corrosion.

Features

- ❑ **Newly Designed, Brushed Hairline Aluminum Front Panel**
- ❑ **100 Watts/Channel @ 8 ohms (FTC) (North American model)**
- ❑ **125 Watts/Channel @ 4 ohms (IEC) (European and Australian model)**
- ❑ **WRAT (Wide Range Amplifier Technology)**
- ❑ **High-Current, Low-Impedance Drive**
- ❑ **Discrete Output Stage Circuitry**
- ❑ **XM and SIRIUS Ready (North American model)**
- ❑ **6 Audio Inputs (CD, TAPE, GAME/TV, CBL/SAT, DVD, VCR/DVR)**
- ❑ **4 Video Inputs (GAME/TV, CBL/SAT, DVD, VCR/DVR)**
- ❑ **Phono Input**
- ❑ **2 Audio and Video Outputs**
- ❑ **Speaker A/B Terminals**
- ❑ **Direct Mode**
- ❑ **Pure Audio Mode**
- ❑ **RDS (PS/PTY/RT/TP) (European model)**
- ❑ **IR Input/Output**
- ❑ **Banana Plug-Compatible Speaker Posts (North American model)**
- ❑ **Compatible with RI Dock for the iPod**

*

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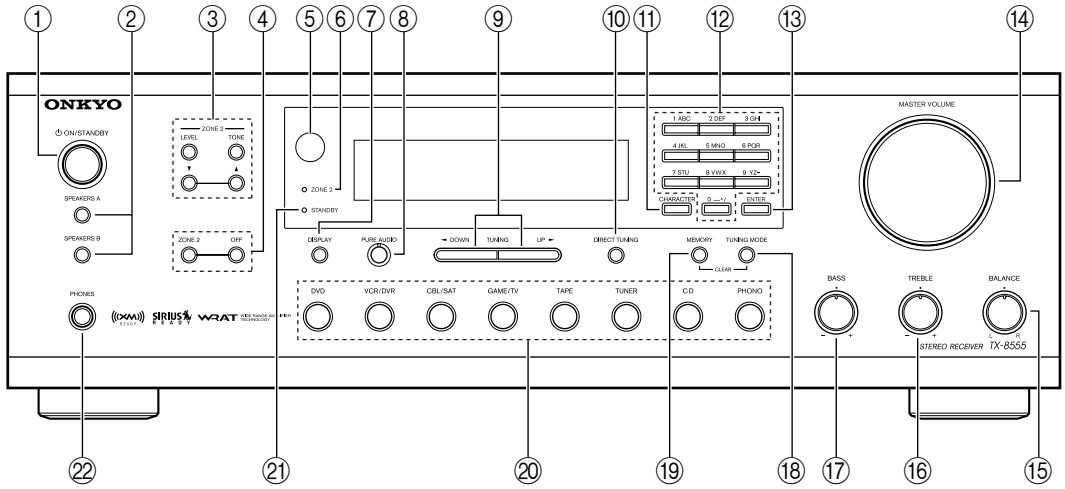
SIRIUS READY

©2005 SIRIUS Satellite Radio Inc. “SIRIUS”, Sirius Connect, the SIRIUS dog logo, channel names and logos are trademarks of SIRIUS Satellite Radio Inc. Available only in the contiguous United States (excluding Alaska and Hawaii) and Canada.

Getting to Know the Receiver

Front Panel



For detailed information, see the pages in parentheses.

① **ON/STANDBY button (22)**
Sets the receiver to On or Standby.

② **SPEAKERS A and B switches (23)**
Turn speaker sets A and B on or off.

③ **ZONE 2 LEVEL, TONE, [▲] / [▼] buttons (38)**
The LEVEL button and [▲]/[▼] buttons are used when adjusting the volume level of Zone 2.
The TONE button and [▲]/[▼] buttons are used when adjusting the Bass/Treble level and balance of Zone 2.

④ **ZONE 2/OFF buttons (37)**
The ZONE 2 button is used when setting Zone 2.
The OFF button is used to turn off Zone 2.

⑤ **Remote-control sensor (12)**
Receives control signals from the remote controller.

⑥ **ZONE 2 indicator (37)**
Flashes when Zone 2 is being set. Light up when Zone 2 is on.

⑦ **DISPLAY (30)**
Displays various information about the currently selected input source.
On the European model, it's used with RDS (Radio Data System). See "Using RDS (European Model Only)" on page 30.

⑧ **PURE AUDIO button and indicator (25)**
Selects the Pure Audio listening mode. The indicator lights up and the display disappears when this mode is selected.

⑨ **TUNING UP/DOWN buttons (28)**
Used for radio tuning.

⑩ **DIRECT TUNING button (29)**
When you know the frequency for the station you want to listen to, you can select the station by entering the frequency directly using this button and number buttons.

⑪ **CHARACTER button (32)**
Used to label the FM or AM station preset number.

⑫ **Number buttons (29)**
Used to select a station by entering the frequency directly or to enter characters to label the station preset number.

⑬ **ENTER button (31)**
Used to select satellite radio stations.

⑭ **MASTER VOLUME control (23)**
Sets the volume of the receiver.

⑮ **BALANCE control (25)**
This control is for adjusting the sound level balance between the left and right channel for speakers and headphones.

⑯ **TREBLE control (25)**
This control is for adjusting the level of treble sounds.

⑰ **BASS control (25)**
This control is for adjusting the level of bass sounds.

⑱ **TUNING MODE button (28, 29)**
Selects the Auto or Manual tuning mode for AM and FM radio.

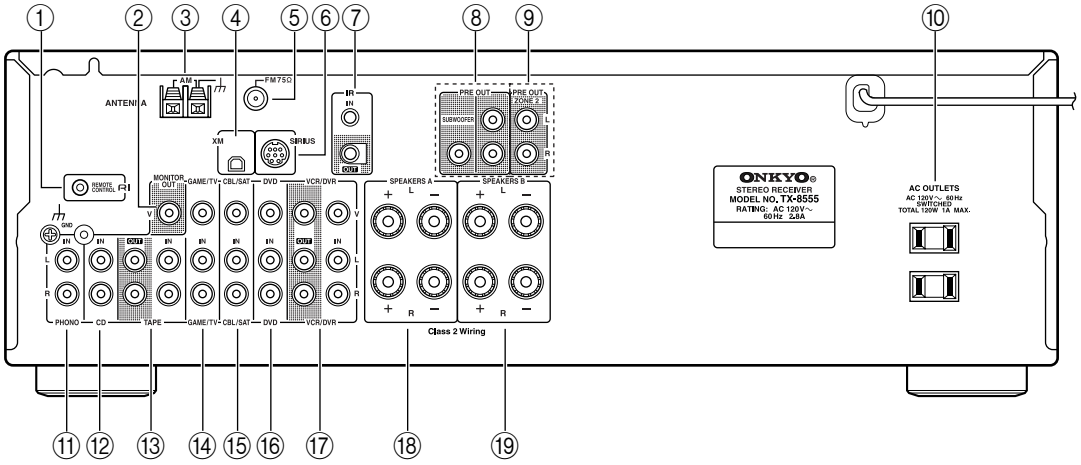
⑲ **MEMORY button (29)**
Used when storing or deleting radio presets.

⑳ **Input selector buttons (23, 26)**
Used to select the input sources.

㉑ **STANDBY indicator (22)**
Lights up when the receiver is on Standby and flashes while a signal is being received from the remote controller.

㉒ **PHONES jack (24)**
This 1/4-inch phone jack is for connecting a standard pair of stereo headphones for private listening.

Rear Panel



① **REMOTE CONTROL jack**
This RI (Remote Interactive) jack can be connected to the RI jacks on your other Onkyo audio components. The receiver's remote controller can then be used to control all of your components. To use RI, you must make an analog audio connection between the receiver and each component.

② **MONITOR OUT**
This jack is for connecting a TV with a composite video output.

③ **AM ANTENNA**
These push terminals are for connecting an AM antenna.

④ **XM antenna (North American model only)**
This jack is for connecting a satellite radio such as the XM Mini-Tuner System, sold separately.

⑤ **FM ANTENNA**
This jack is for connecting an FM antenna.

⑥ **SIRIUS antenna (North American model only)**
This jack is for connecting a SIRIUS digital antenna, sold separately (see the separate SIRIUS instructions).

⑦ **IR IN/OUT**
A commercially available IR receiver can be connected to the IR IN jack, allowing you to control the receiver while you're in Zone 2, or control it when it's out of sight, for example, installed in a cabinet.
A commercially available IR emitter can be connected to the IR OUT jack to pass IR (infrared) remote control signals along to other components.

⑧ **PRE OUT: L/R, SUBWOOFER**
This analog audio output can be connected to the analog audio input on a power amplifier when you want to use the receiver solely as a preamplifier. The SUBWOOFER jack is for connecting a powered subwoofer.

⑨ **ZONE 2 PRE OUT L/R**
These analog audio outputs can be connected to the line inputs on amplifiers in Zone 2.

⑩ **AC OUTLET**
This switched AC outlet can be used to supply power to another component. The type of outlet depends on the country in which you purchased your receiver.

⑪ **PHONO (MM) input and grounding terminal**
This analog audio input is for connecting a turntable with a moving-magnet cartridge. The screw located on the upper-left of the PHONO (MM) inputs is for connecting a turntable's ground wire.

⑫ **CD input**
This analog audio input is for connecting a CD player's analog audio output.

⑬ **TAPE IN/OUT**
This analog audio input and output are for connecting a recorder with an analog audio input and output, such as a cassette deck, MD recorder, etc.

⑭ **GAME/TV IN**
A game console or TV output can be connected here. There are composite video input jack and analog audio input jacks.

⑮ **CBL/SAT IN**
A cable or satellite receiver can be connected here. There are composite video input jack and analog audio input jacks.

⑯ **DVD IN**
These jacks are for connecting a DVD player. There are composite video input jack for connecting the video signal, and stereo (FRONT) jacks for connecting the analog audio signals.

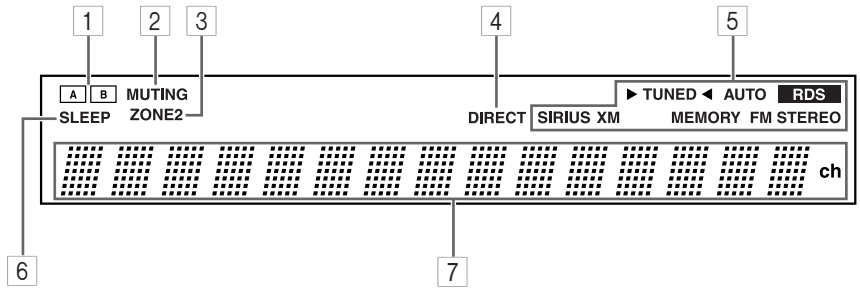
⑰ **VCR/DVR IN/OUT**
A video component, such as a VCR or DVR, can be connected here for recording and playback. There are composite video input and output jacks for connecting the video signal, and there are analog audio input jacks for connecting the audio signal.

⑱ **SPEAKERS A**
These terminal posts are for connecting speaker set A.

⑲ **SPEAKERS B**
These terminal posts are for connecting speaker set B.

See pages 13–21 for hookup information.

Display



For detailed information, see the pages in parentheses.

1 **A and B speaker indicators**
Indicator A lights up when speaker set A is on.
Indicator B lights up when speaker set B is on.

2 **MUTING indicator**
Flashes while the receiver is muted.

3 **ZONE 2 indicator**
Lights up when Zone 2 is on.

4 **DIRECT indicator**
Lights up while the DIRECT function is enabled.

5 **Radio indicators**

TUNED: Lights up when tuned to a radio station.

AUTO: For AM and FM radio, lights up when Auto Tuning is selected, and disappears when Manual Tuning mode is selected.

RDS (European models only): Lights up when tuned to a radio station that supports RDS (Radio Data System).

SIRIUS (North American model only) : Lights up when tuned to SIRIUS Satellite Radio.

XM (North American model only) : Lights up when tuned to XM Satellite Radio.

MEMORY: Lights up when presetting radio stations.

FM STEREO: Lights up when tuned to a stereo FM station.

6 **SLEEP indicator**
Lights up when the Sleep function has been set.

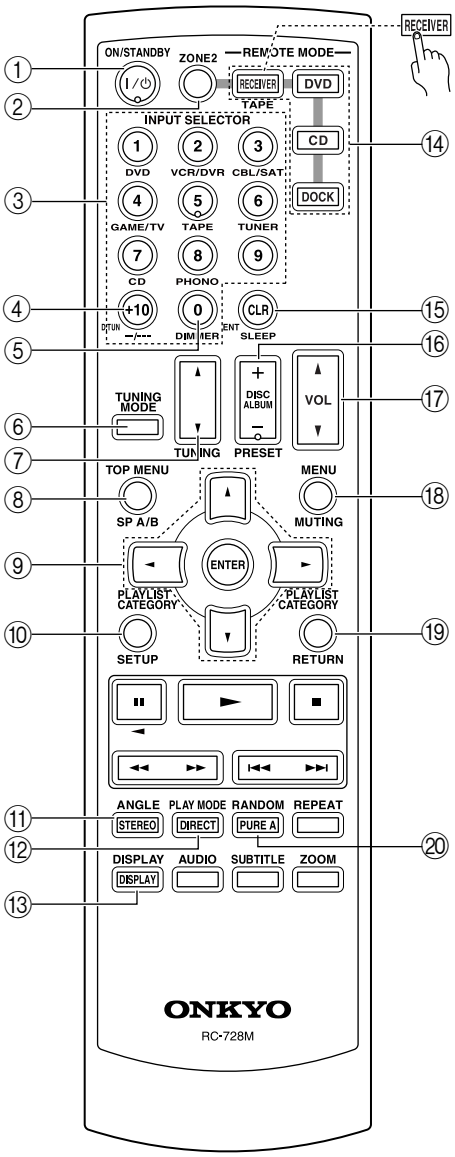
7 **Message area**
Displays various information about the selected input source.

Remote Controller

To control the AV receiver, press the [RECEIVER] Remote Mode button to select Receiver mode.

You can also use the remote controller to control your DVD player, CD player, and other components. See pages 40-43 for more details.

For detailed information, see the pages in parentheses.



① **ON/STANDBY button (22)**
Sets the receiver to On or Standby.

② **ZONE 2 button (37)**
Used when setting Zone 2.

③ **INPUT SELECTOR buttons (23) and number buttons (29)**
Selects the input sources. After the D.TUN button is pressed, the buttons can be used to select AM and FM radio stations and satellite radio channels directly.

④ **D.TUN button (29)**
Selects the Direct tuning mode.

⑤ **DIMMER button (24)**
Adjusts the display brightness.

⑥ **TUNING MODE button (28, 29)**
Selects the Auto or Manual tuning mode for AM and FM radio.

⑦ **TUNING [▲]/[▼] buttons (28)**
Used for radio tuning.

⑧ **SP A/B button (23)**
Used for speaker A/B setting.

⑨ **Arrow [▲]/[▼]/[◄]/[►] and ENTER buttons (28)**
Used to select and adjust settings.
For XM/SIRIUS, the Up and Down [▲]/[▼] buttons are used to select channels, and the [ENTER] button is used to change the search mode.
The Left and Right [◄]/[►] buttons are used to select categories.

⑩ **SETUP button (15)**
Used to access the setup menus.

⑪ **STEREO button**
Used to cancel DIRECT function or Pure Audio listening mode.

⑫ **DIRECT button (25)**
Outputs the original sound source without applying any effects.

⑬ **DISPLAY button (30)**
Displays various information about the selected input source.

⑭ **Remote Mode buttons (40-43)**
Selects the remote controller modes.

⑮ **CLR/SLEEP button (24)**
Used with the Sleep function.

⑯ **PRESET [+]/[–] buttons (29)**
Used to select radio presets.

⑰ **VOL [▲]/[▼] buttons (23)**
Adjusts the volume of the receiver regardless of the currently selected remote controller mode.

⑱ **MUTING button (24)**
Mutes or unmutes the receiver.

⑲ **RETURN button**
Selects the previously displayed setup menu.

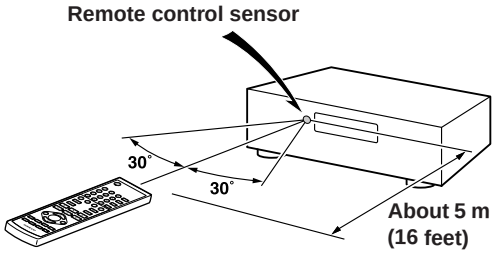
⑳ **PURE A button (25)**
Selects the Pure Audio listening mode.

Note:

- An Onkyo cassette recorder connected via RI can also be controlled in Receiver mode (see page “Controlling a Cassette Recorder” on page 43).

Using the Remote Controller

Point the remote controller toward the remote control sensor.



Notes:

- The remote controller may not work reliably if the receiver is subjected to bright light, such as direct sunlight or inverter-type fluorescent lights. Keep this in mind when installing.
- If another remote controller of the same type is used in the same room, or the receiver is installed close to equipment that uses infrared rays, the remote controller may not work reliably.
- Don’t put anything, such as a book, on the remote controller, because the buttons may be pressed inadvertently, thereby draining the batteries.
- The remote controller may not work reliably if the receiver is installed in a rack behind colored glass doors. Keep this in mind when installing.
- The remote controller will not work if there’s an obstacle between it and the receiver’s remote control sensor.

Connecting Your Speakers

Disconnect the power cord from the wall outlet before making any connections.

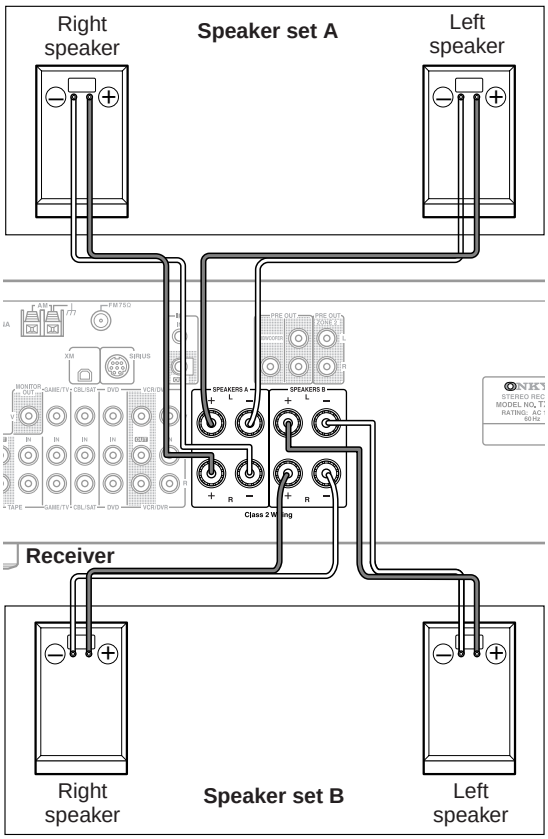
Speaker Connection Precautions

The receiver allows you to connect two sets of speakers. When two sets of speakers are connected, you can select which speaker set outputs sound or use both sets to output sound simultaneously.

- When you connect one set of speakers to either SPEAKERS A or SPEAKERS B terminal posts, or when you connect two sets of speakers to both speaker terminal posts and output sound only from either speaker set, use speakers whose impedance is between 4 and 16 ohms. For the North American model, when the speaker impedance is 4 or 6 ohms, set the speaker impedance setting on the receiver to 6 ohms (see page 15 for details).
- When you connect speakers to both SPEAKER A and SPEAKER B terminal posts and output sound from both speaker sets simultaneously, use speakers whose impedance is between 8 and 16 ohms.

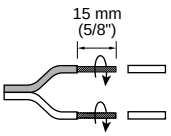
Note:
If you make an incorrect setting for the speakers or the impedance values, the built-in protection circuit may be activated resulting in no sound output from speakers.

The following illustration shows which speaker should be connected to each pair of terminals.



Connecting the Speaker Cables

1 **Strip about 15 mm (5/8 inch) of insulation from the ends of the speaker cables, and twist the bare wires tightly, as shown.**

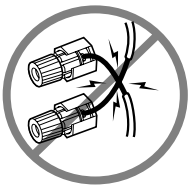


2 **Unscrew the terminal.**

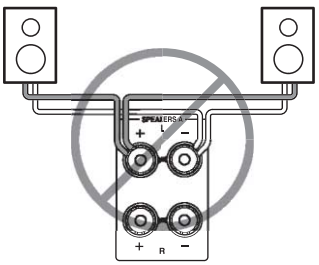
3 **Fully insert the bare wires.**

4 **Screw the terminal tight.**

- Read the instructions supplied with your speakers.
- Pay close attention to speaker wiring polarity. In other words, connect positive (+) terminals only to positive (+) terminals, and negative (–) terminals only to negative (–) terminals. If you get them the wrong way around, the sound will be out of phase and will sound unnatural.
- Unnecessarily long or very thin speaker cables may affect the sound quality and should be avoided.
- Be careful not to short the positive and negative wires. Doing so may damage the receiver.

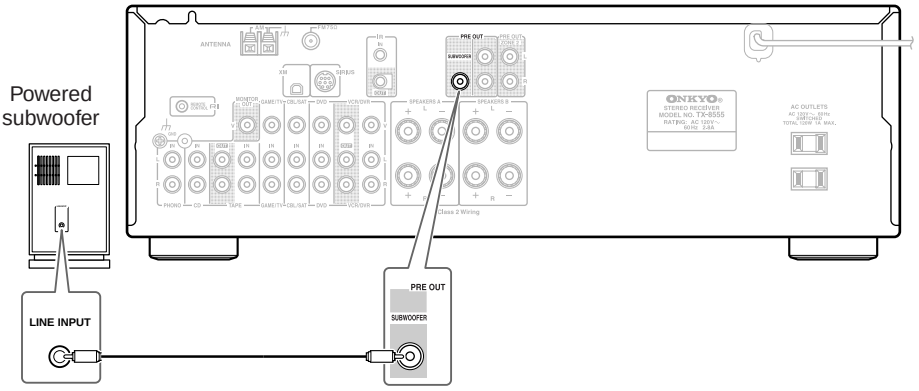


- Don't connect more than one cable to each speaker terminal. Doing so may damage the receiver.
- Don't connect a speaker to more than one pair of speaker terminals.



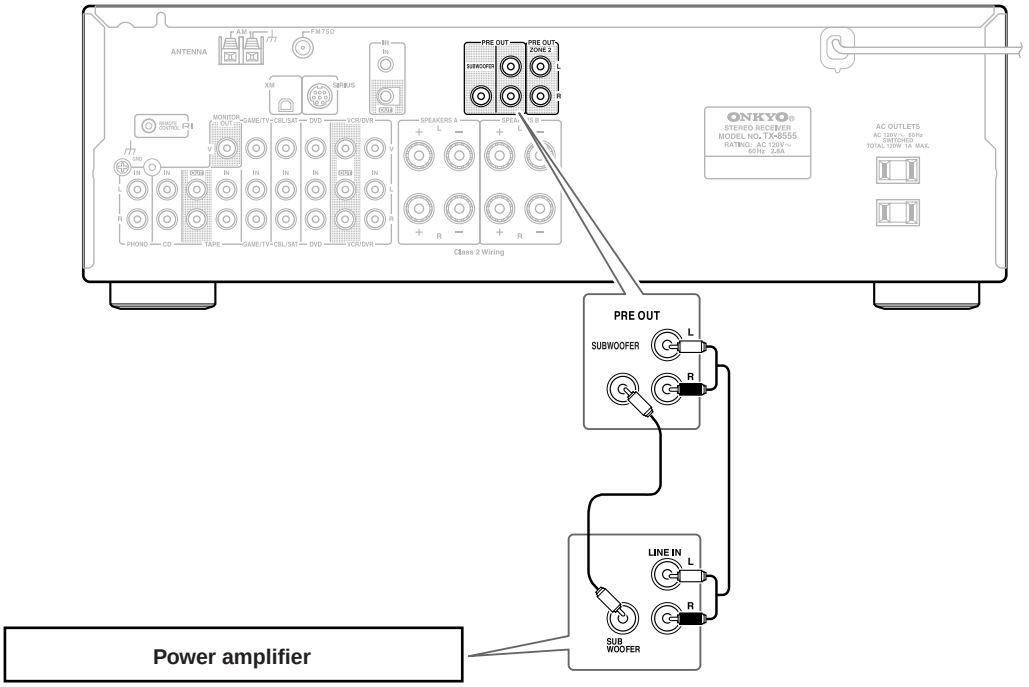
Connecting a Powered Subwoofer

Using a suitable cable, connect the receiver's PRE OUT: SUBWOOFER to the input on your powered subwoofer. If your subwoofer is unpowered and you're using an external amplifier, connect the PRE OUT: SUBWOOFER to the amp's input.



Connecting a Power Amplifier

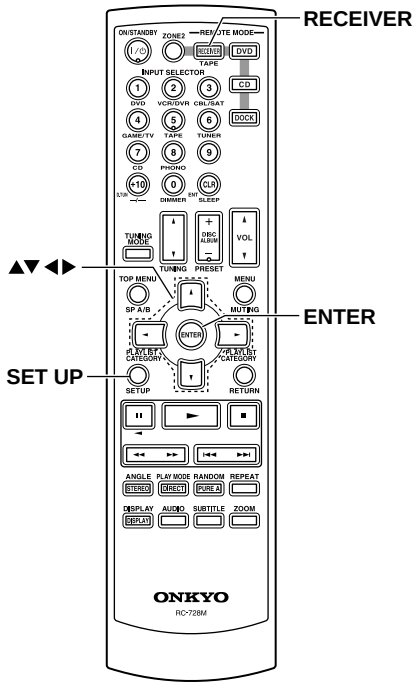
If you want to use a more powerful power amplifier and use the receiver as a preamp, connect it to the PRE OUT jacks, and connect all speakers and the subwoofer to the power amplifier. If you have a powered subwoofer, connect it to this receiver's PRE OUT SUBWOOFER jack.



Configuring the Speaker Impedance

In this model, the factory default for speaker impedance is "8 ohms." When you change the speaker impedance setting, read "Speaker Connection Precautions" on page 13 carefully before performing the procedures below.

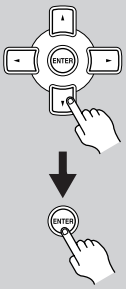
Note:
Be sure to minimize the volume level on the receiver before configuring the speaker impedance.



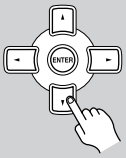
1 **Turn on the power.**

2 **Press the [RECEIVER] button and then the SETUP button on the remote controller.**

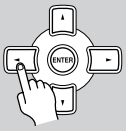
3 **Use the Up and Down [▲]/[▼] buttons to select "1. Hardware set," and then press [ENTER].**
The Hardware Setup menu appears on the display.



4 **Use the Up and Down [▲]/[▼] buttons to select "Impedance: 8 ohms" indication.**



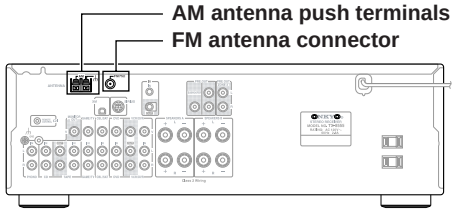
5 **Change the impedance value to "6 ohms" using the Left and Right [◄]/[►] buttons.**



6 **Press the SETUP button on the remote controller to complete the setting.**
When you restore the impedance setting to 8 ohms, use the same procedures above.

Connecting Antenna

This section explains how to connect the supplied indoor FM antenna and AM loop antenna, and how to connect commercially available outdoor FM and AM antennas.
The receiver won't pick up any radio signals without any antenna connected, so you must connect the antenna to use the tuner.

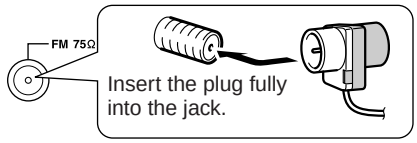


Connecting the Indoor FM Antenna

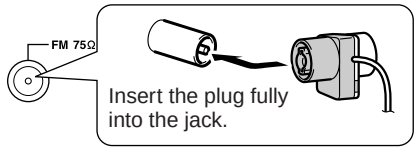
The supplied indoor FM antenna is for indoor use only.

1 **Attach the FM antenna, as shown.**

■ **North American Model**

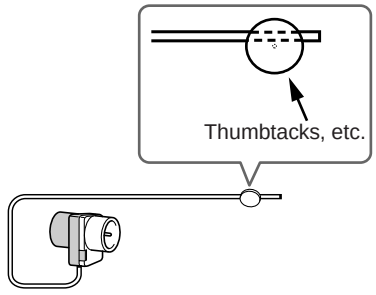


■ **Other Models**



Once your receiver is ready for use, you'll need to tune into an FM radio station and adjust the position of the FM antenna to achieve the best possible reception.

2 **Use thumbtacks or something similar to fix the FM antenna into position.**



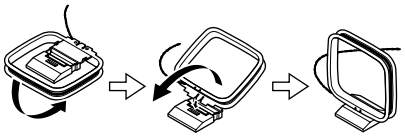
Caution: Be careful that you don't injure yourself when using thumbtacks.

If you cannot achieve good reception with the supplied indoor FM antenna, try a commercially available outdoor FM antenna instead (see page 17).

Connecting the AM Loop Antenna

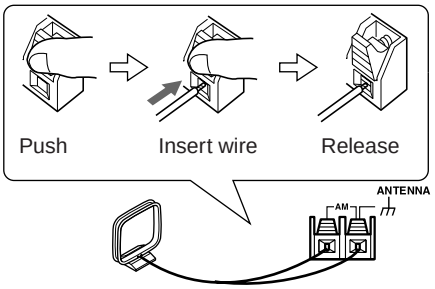
The supplied indoor AM loop antenna is for indoor use only.

1 **Assemble the AM loop antenna, inserting the tabs into the base, as shown.**



2 **Connect both wires of the AM loop antenna to the AM push terminals, as shown.**

(The antenna's wires are not polarity sensitive, so they can be connected either way around.)
Make sure that the wires are attached securely and that the push terminals are gripping the bare wires, not the insulation.

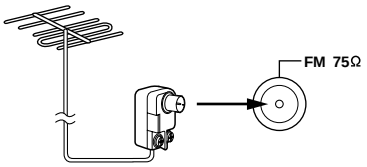


Once your receiver is ready for use, you'll need to tune into an AM radio station and adjust the position of the AM antenna to achieve the best possible reception.
Keep the antenna as far away as possible from your receiver, TV, speaker cables, and power cords.

If you cannot achieve good reception with the supplied indoor AM loop antenna, try using it with a commercially available outdoor AM antenna (see page 17).

Connecting an Outdoor FM Antenna

If you cannot achieve good reception with the supplied indoor FM antenna, try a commercially available outdoor FM antenna instead.

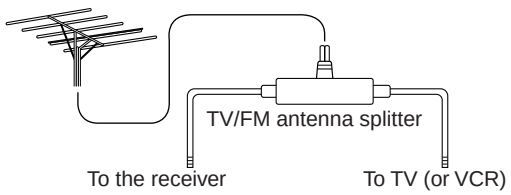


Notes:

- Outdoor FM antennas work best outside, but usable results can sometimes be obtained when installed in an attic or loft.
- For best results, install the outdoor FM antenna well away from tall buildings, preferably with a clear line of sight to your local FM transmitter.
- Outdoor antenna should be located away from possible noise sources, such as neon signs, busy roads, etc.
- For safety reasons, outdoor antenna should be situated well away from power lines and other high-voltage equipment.
- Outdoor antenna must be grounded in accordance with local regulations to prevent electrical shock hazards.

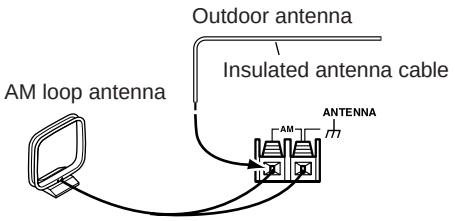
■ Using a TV/FM Antenna Splitter

It's best not to use the same antenna for both FM and TV reception, as this can cause interference problems. If circumstances demand it, use a TV/FM antenna splitter, as shown.



Connecting an Outdoor AM Antenna

If good reception cannot be achieved using the supplied AM loop antenna, an outdoor AM antenna can be used in addition to the loop antenna, as shown.



Outdoor AM antennas work best when installed outside horizontally, but good results can sometimes be obtained indoors by mounting horizontally above a window. Note that the AM loop antenna should be left connected.

Outdoor antenna must be grounded in accordance with local regulations to prevent electrical shock hazards.

Connecting Your Components

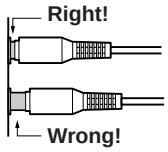
Before Making any Connections

- Always refer to the instructions that came with the component that you are connecting.
- Do not plug in the power cord until all connections have been properly made.
- Do not bind audio cables with power cords and speaker cables. Doing so may adversely affect the sound quality.
- To prevent interference, keep power cords and speaker cables away from the tuner's antenna.

AV Connection Color Coding

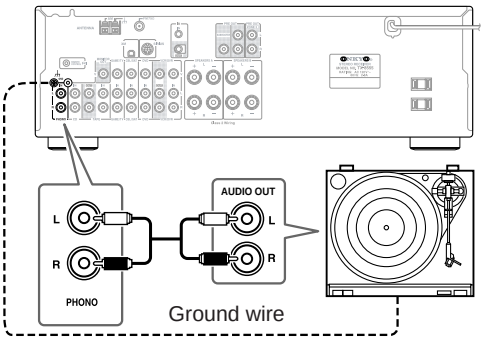
RCA-type AV connections are usually color coded: red, white, and yellow. Use red plugs to connect right-channel audio inputs and outputs (typically labeled "R"). Use white plugs to connect left-channel audio inputs and outputs (typically labeled "L"). And use yellow plugs to connect composite video inputs and outputs.

- Push each plug in all the way to make a good connection (loose connections can cause noise or malfunctions).



Connecting a Turntable

The receiver's PHONO input jacks are for use with moving-magnet (MM) type cartridges.
Use an analog audio cable to connect the receiver's PHONO L/R jacks to the audio output jacks on the turntable, as shown.

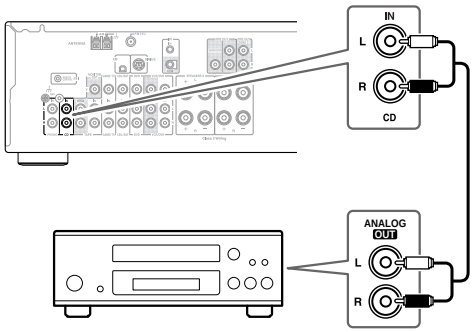


Notes:

- If the turntable has a ground wire, connect it to receiver's GND terminal. With some turntables, connecting the ground wire may cause hum, in which case it should be disconnected.
- If the turntable has a moving-coil (MC) type cartridge, you'll need a commercially available MC phono preamp. In this case, connect the turntable to the phono preamp's input, and connect the phono preamp's output to the receiver's PHONO L/R jacks.

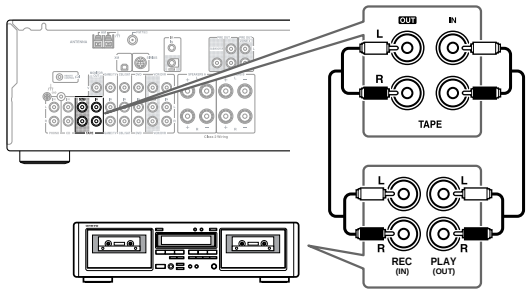
Connecting a CD Player

Use an analog audio cable to connect the receiver's CD L/R jacks to the analog audio output jacks on the CD player, as shown.



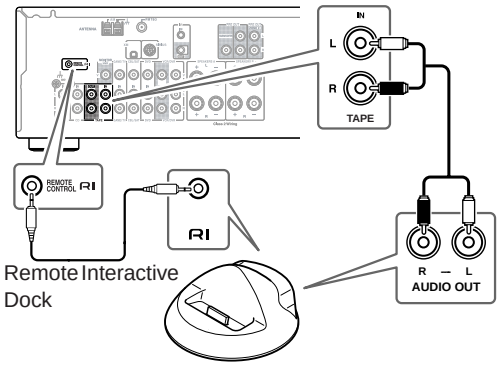
Connecting a Recording Component

To connect recording components, such as cassette deck, MD recorder and CD recorder, use an analog audio cable to connect the receiver's TAPE IN L/R jacks to the cassette deck's analog audio output jacks, and use another analog audio cable to connect the receiver's TAPE OUT L/R jacks to the cassette deck's analog audio input jacks, as shown.



Connecting a Remote Interactive Dock (RI Dock)

Use an analog audio cable to connect the TAPE IN L/R or VCR/DVR IN L/R jacks to the RI Dock's analog audio output jacks. Then use an RI cable to connect the receiver's RI jack to the RI Dock's RI jack, as shown. When you change the input display name to "HDD," you can operate the RI Dock using the remote controller supplied with the receiver (see page 22).



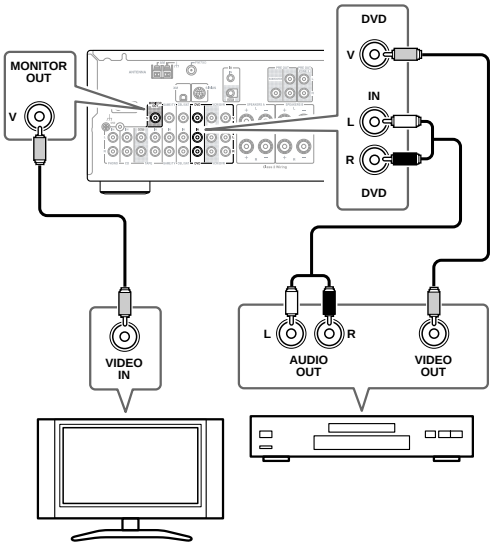
Note:
Set the RI Dock's RI MODE switch to HDD or HDD/DOCK.

Connecting a DVD Player

Use an analog audio cable to connect the DVD IN L/R jacks to the analog audio output jacks on the DVD player, and use a video cable to connect the DVD IN V jack to the composite video output jack on the DVD player.

Then, connect the MONITOR OUT jack to a composite video input jack on the TV.

You can select the video and sound from the DVD player simultaneously by pressing the DVD input selector button.



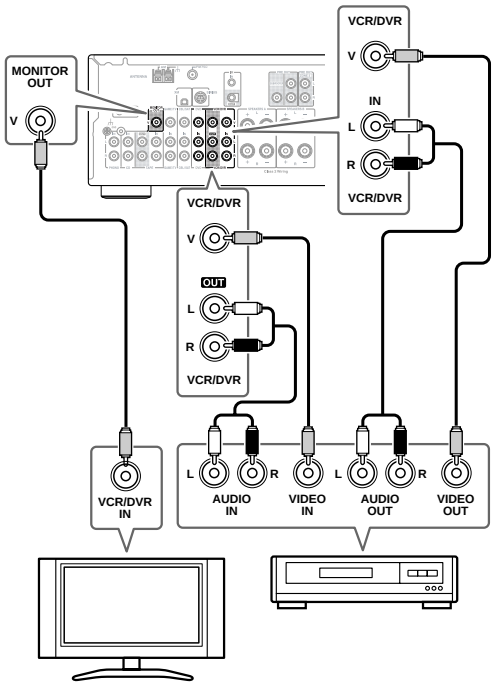
Connecting a VCR

Use an analog audio cable to connect the VCR/DVR IN L/R jacks to the analog audio output jacks on the VCR, and use a video cable to connect the VCR/DVR IN V jack to the composite video output jack on the VCR.

Then use an analog audio cable to connect the VCR/DVR OUT L/R jacks to the analog audio input jacks on the VCR, and use a video cable to connect the VCR/DVR OUT V jack to the composite video input jack on the VCR.

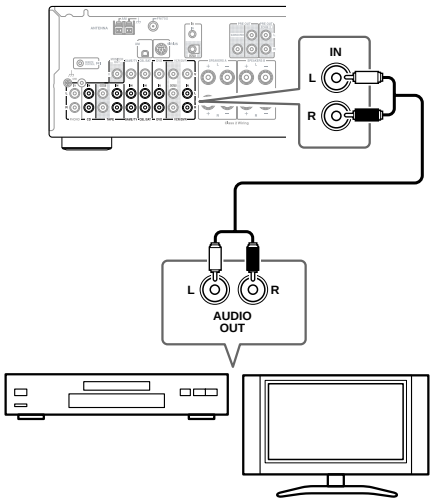
In addition, connect the MONITOR OUT jack to a composite video input jack on the TV.

You can select the video and sound from the VCR simultaneously by pressing the VCR/DVR input selector button.



Connecting a TV or Other Component with an Audio Output

Use an analog audio cable to connect the unused audio input L/R jacks on the receiver to the analog audio output jacks on the connected component.



Connecting RI Components

If you connect other Onkyo components to the receiver with the appropriate RI and audio cables, you can use the following system functions. RI cables are special cables solely for use with Onkyo products (no RI cables are supplied with the receiver).

Auto Power On

When you turn on the power or start playback on a component that's connected to the receiver, the receiver will turn on automatically. And when you set the receiver to Standby, all connected components will go on Standby as well.

Direct Change

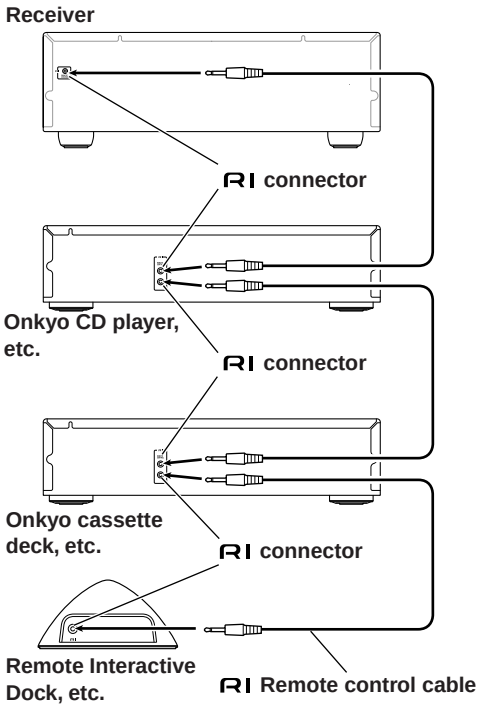
When playback is started on an audio component connected via RI, the receiver will automatically select that component as the input source.

Remote Control Operation

You can control all components in your system by using the receiver's remote controller. See pages 11-12 for more information.

With RI (Remote Interactive), you can control your RI-compatible Onkyo CD player, RI Dock, and so on with the receiver's remote controller.

- **To use RI, you must make an analog audio connection between the receiver and each audio component.**

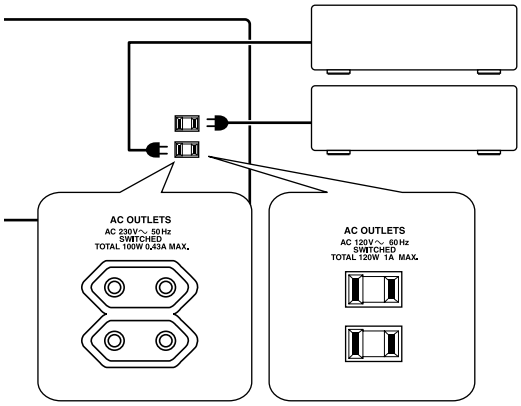


Notes:

- Push each plug in all the way to make a good connection.
- Use only dedicated RI cables for RI connections (no RI cables are supplied with the receiver).
- RI jacks should be connected only to Onkyo components. Connecting them to another manufacturer's component may cause the receiver to malfunction.
- Some components may not support all RI functions. See the manuals supplied with your other Onkyo components for more information.

Connecting the Power Cords of Other Components

The receiver has AC outlets on its rear panel that can be used to connect the power cords of other components that you intend to use with the receiver. These components can then be left turned on so that they turn on and off as and when the receiver is turned on and set to Standby.



e.g. European model e.g. North American model

Caution:

- Make sure that the total capacity of the components that you connect to the AC OUTLETS does not exceed the stated capacity (e.g., TOTAL 120 W).

Notes:

- Onkyo components connected via RI should be connected directly to a wall outlet, not an AC OUTLETS on the receiver.
- The number of AC OUTLETS, socket type, and total capacity depend on the country in which you purchased the receiver.

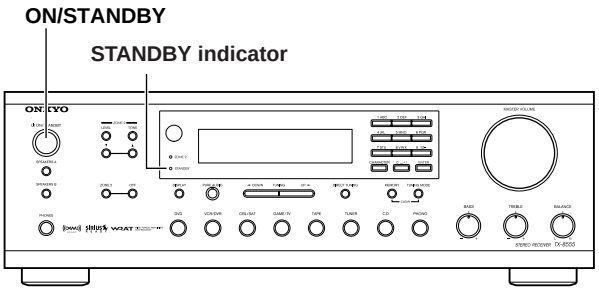
Connecting the Power Cord

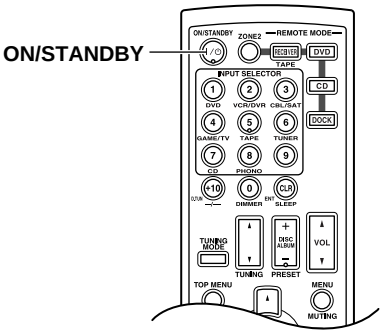
- Connect the receiver's power cord to a suitable wall outlet.

Notes:

- **Before connecting the power cord, connect all of your speakers and AV components.**
- Turning on the receiver may cause a momentary power surge that might interfere with other electrical equipment on the same circuit. If this is a problem, plug the receiver into a different branch circuit.

Turning On the Receiver





Turning On and Standby

1

Receiver

⏻ ON/STANDBY

or

Remote controller

ON/STANDBY

Press the [ON/STANDBY] button. Alternatively, press the remote controller's [ON/STANDBY] button.

The receiver comes on, the display lights up, and the STANDBY indicator goes off.

To turn the receiver off, press the [ON/STANDBY] button, or press the remote controller's [ON/STANDBY] button. The receiver will enter Standby mode. To prevent any loud surprises when you next turn on the receiver, always turn down the volume before you turn it off.

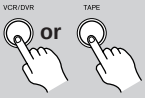
Changing the Input Display

For the TAPE and VCR/DVR buttons, the input display name can be changed in the sequence as shown below. When the input display name has been changed for one of the buttons below, the display name for the other button cannot be changed.

- TAPE button : TAPE→MD→CDR→DOCK
- VCR/DVR button : VCR/DVR→DOCK

1

VCR/DVR TAPE



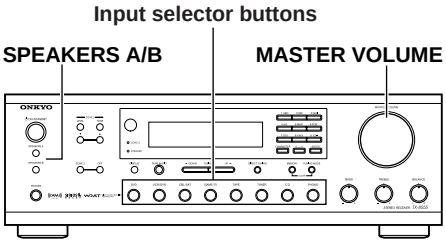
Press the appropriate input selector button.

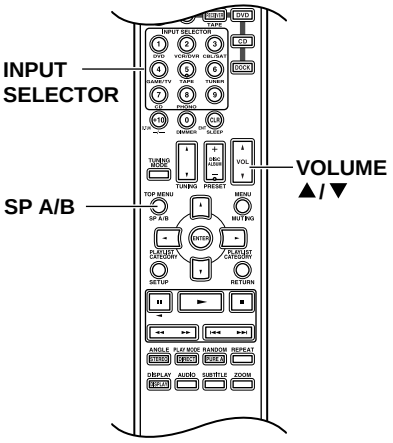
The selected input name appears in the display.

2

Press and hold down the input selector button selected in the Step 1 above for approximately 3 seconds to change the display name.

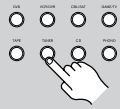
Enjoying Audio Sources





1

Receiver



Remote controller

Press the input selector button to select the component that you want to listen to.

2

Receiver

SPEAKERS A

SPEAKERS B

Remote controller

SP A/B

Use the [SPEAKERS A] and [SPEAKERS B] buttons on the receiver to select the speaker set that you want to use.

The A and B speaker indicators show whether each speaker set is on or off.

A B —— Indicators

You can use the [SP A/B] button on the remote controller. To select the speaker set, press the [SP A/B] button repeatedly.

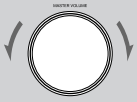
Note for North American model:
When you connect a set of speakers whose impedance is 4 or 6 ohms and output sound only from this speaker set, the speaker impedance setting on the receiver should be set to 6 ohms (see page 15).

3

Start playback on the selected component.

4

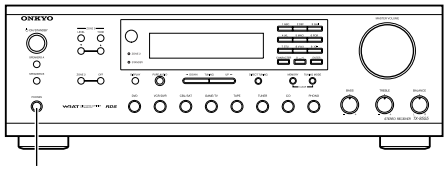
Receiver

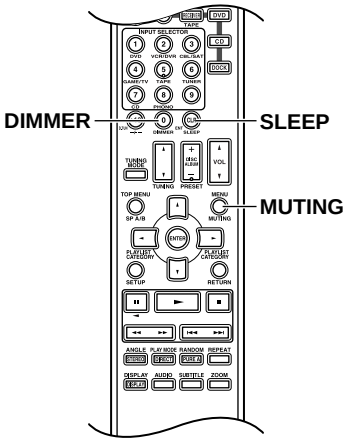


Remote controller

To adjust the volume, use the receiver's [MASTER VOLUME] control, or the remote controller's VOLUME [▲]/[▼] buttons.

Turn the control clockwise to turn up the volume or counterclockwise to turn down the volume.





Muting the receiver (remote controller only)

You can temporarily mute the output of the receiver.

1

Press the remote controller's [MUTING] button.

The receiver is muted.

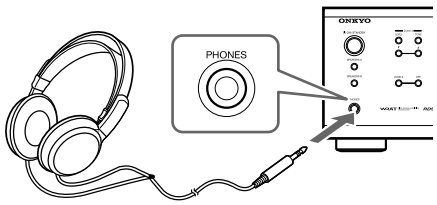
To unmute the receiver, press the [MUTING] button again.

Note:

The Mute function will be cancelled if the remote controller's VOLUME buttons are pressed or the receiver is set to Standby.

Using Headphones

You can connect a pair of stereo headphones (1/4-inch phone plug) to the receiver's PHONES jack for private listening.



Notes:

- Always turn down the volume before connecting your headphones.
- Sound output from speakers is not turned off even if (when) the headphones plug is inserted in the PHONES jack. To turn off or on the sound output from speakers, use the SPEAKERS A and SPEAKERS B switches.

Setting the Display Brightness

You can adjust the brightness of the display.

1

Press the remote controller's [DIMMER] button repeatedly to select: dim, dimmer, or normal brightness.

Using the Sleep Timer (remote controller only)

With the sleep timer, you can set the receiver so that it turns off automatically after a specified period.

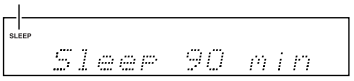
1

Press the remote controller's [SLEEP] button repeatedly to select the required sleep time.

You can set the sleep time from 90 to 10 minutes in 10 minute steps.

The SLEEP indicator appears on the display when the sleep timer has been set, as shown. The specified sleep time appears on the display for about 5 seconds, then the previous display reappears.

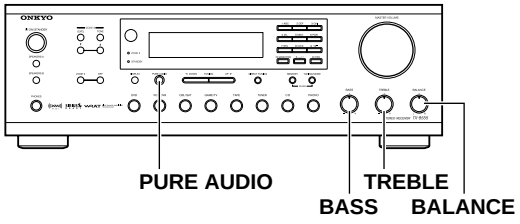
SLEEP indicator

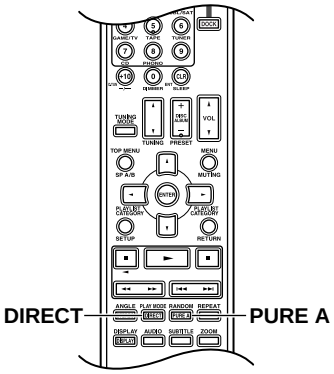


To cancel the sleep timer, press the [SLEEP] button repeatedly until the SLEEP indicator disappears.

To check the remaining sleep time, press the [SLEEP] button. Note that if you press the [SLEEP] button while the sleep time is being displayed, you'll shorten the sleep time by 10 minutes.

This section explains functions that can be used with any input source.

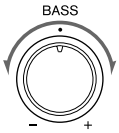




Using the Tone and Balance Controls

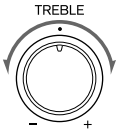
Adjusting the Bass

The BASS control adjusts bass sounds. Turn it up to make them louder. Turn it down to make them quieter. Normally, it should be set midway.



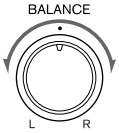
Adjusting the Treble

The TREBLE control adjusts treble sounds. Turn it up to make them louder. Turn it down to make them quieter. Normally, it should be set midway.



Adjusting the Balance

The BALANCE control is used to control the relative volume level of the left and right speaker systems or headphones.



Setting the DIRECT Function

Pressing the [PURE AUDIO] button on the receiver repeatedly until the DIRECT indicator lights up or pressing the [DIRECT] button on the remote controller activates the DIRECT function. To turn the function off, press the [PURE AUDIO] button on the receiver repeatedly until no indicator lights up or press the [STEREO] button on the remote controller.

When the DIRECT function is off, the tone controls can be used to adjust the sound.

When the DIRECT function is on, the tone controls are bypassed, so you can enjoy a pure sound.

You can configure whether the DIRECT function is applied or not for input sources individually.

Enjoying the Pure Audio Sound

Pressing the [PURE AUDIO] button on the receiver repeatedly until the PURE AUDIO indicator lights up or pressing the [PURE A] button on the remote controller activates the Pure Audio listening mode. To turn the mode off, press the [PURE AUDIO] button on the receiver repeatedly until no indicator lights up or press the [STEREO] button on the remote controller.

The Pure Audio listening mode allows you to enjoy purer sound by disabling the video signal output and turning off the indication in the display.

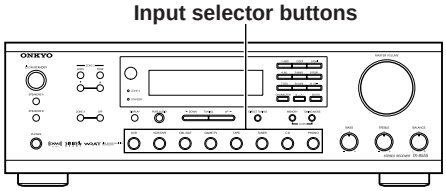
During the Pure Audio listening mode, the tone controls are bypassed and adjustments using the Bass and Treble controls are ignored.

You can configure whether the Pure Audio listening mode is applied or not for input sources individually.

Recording

Unless you have the full consent of the copyright holder, copyright laws prohibit using your recordings for anything other than personal enjoyment!

This section explains how to record the selected input source to a component with recording capability.



Recording the Input Source

You can record an audio signal on a recording component connected to the TAPE OUT, or VCR/DVR OUT jacks.

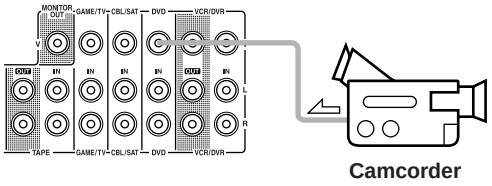
1	**Prepare the recorder:** • Set the recorder so that it's ready for recording. • If necessary, adjust the recording level on the recorder. • See the recorder's manual for more information.
2	**Use an input selector button to select the component that you want to record from.**
3	**Start playback on the component selected in step 2.** **Note:** If you select another input source during recording, the newly selected input source will be recorded.

Note:
The volume, balance, mute and tone controls have no effect on the signal being recorded.

Recording Audio and Video from Separate Sources

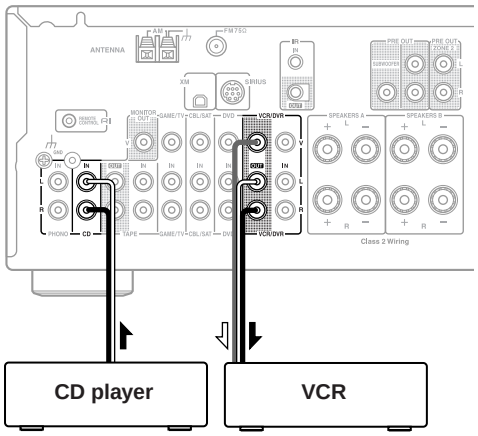
You can overdub audio onto your video recordings by simultaneously recording audio and video from two separate sources. This is possible because only the audio source is switched when an audio-only input source, such as TAPE, TUNER, or CD, is selected, the video source remains the same.

In the following example, audio from the CD player connected to the CD IN jacks, and video from the camcorder connected to the DVD IN jack are recorded by the VCR connected to the VCR/DVR OUT jacks.



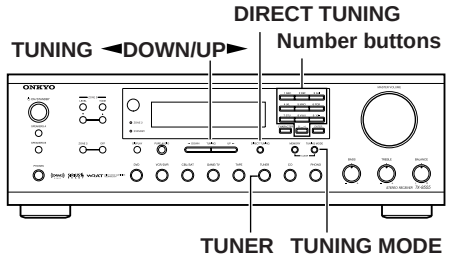
Camcorder

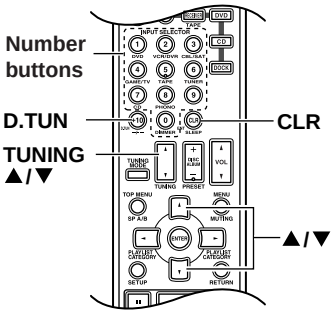
: video signal
: audio signal



1	**Prepare the camcorder and CD player for playback.**
2	**Prepare the VCR for recording.**
3	**Press the [DVD] input selector button.**
4	**Press the [CD] input selector button.** This selects the CD player as the audio source, but leaves the camcorder as the video source.
5	**Start recording on the VCR, then start playback on the camcorder and CD player.** Video from the camcorder and audio from the CD player are recorded by the VCR.

Listening to the Radio



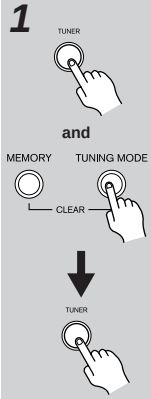


AM Frequency Step Setup (not North America and Europe)

You must specify the AM frequency step used in your area. Note that when this setting is changed, all radio presets are deleted.

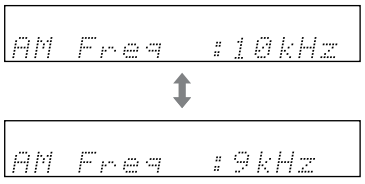
Use the receiver to perform the procedure below.

1



While pressing the [TUNER] button, press the [TUNING MODE] button.

Each press of the [TUNING MODE] button switches the frequency step setting between “10 kHz” and “9 kHz.”

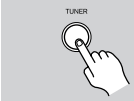


After the desired frequency step is displayed, release the [TUNER] button.

Listening to AM/FM Stations

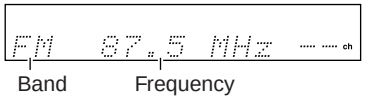
With the built-in tuner, you can enjoy AM and FM radio stations.

1



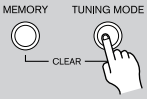
Use the [TUNER] input selector button to select AM or FM.

In this example, FM has been selected.



(Actual display depends on country.)

2



Press the [TUNING MODE] button so that the AUTO indicator appears or disappears from the display.

Auto Tuning

To activate this mode, press the [TUNING MODE] button to turn on the “AUTO” indicator. In this mode, you will receive the broadcast in stereo sound.

Manual Tuning

To activate this mode, press the [TUNING MODE] button to turn off the “AUTO” indicator. In this mode, you will receive the broadcast in monaural sound.

3

Press the TUNING [◄ DOWN] or [UP ►] button.

You can also use the remote controller’s TUNING [▲]/[▼] buttons or arrow [▲]/[▼] buttons to tune the radio.

Auto Tuning

Searching stops when a station is found.

Manual Tuning

The frequency stops changing when you release the button.

Press the buttons repeatedly to change the frequency one step at a time.

■ Tuning into Stations by Frequency

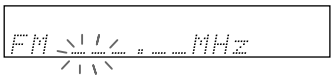
You can tune into AM and FM stations directly by entering the appropriate frequency.

1 Receiver

DIRECT TUNING

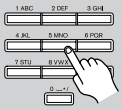
Remote controller

Press the [DIRECT TUNING] button.



(Actual display depends on country.)

2 Receiver

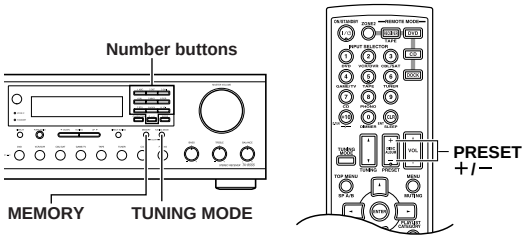


Remote controller

Within 8 seconds, use the number buttons to enter the frequency of the radio station.

For example, to tune to 87.5 (FM), press 8, 7, 5.

Presetting AM/FM Stations



You can store a combination of up to 40 of your favorite AM/FM radio stations as presets.

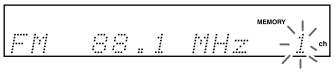
1 **Tune into the AM/FM station that you want to store as a preset.**

2 Receiver

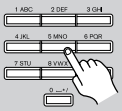
MEMORY

Press the [MEMORY] button.

The MEMORY indicator appears and the preset number flashes.



3 Receiver



While the MEMORY indicator is displayed (about 8 seconds), use the number buttons on the receiver to select a preset from 1 through 40.

4 Receiver

MEMORY

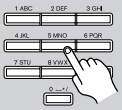
Press the [MEMORY] button again to store the station or channel.

The station or channel is stored and the preset number stops flashing.

Repeat this procedure for all of your favorite AM/FM radio stations.

■ Selecting Presets

1 Receiver



Remote controller

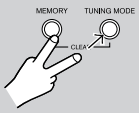
To select a preset, use the number buttons on the receiver, or the remote controller's PRESET [+]/[–] buttons.

■ Deleting Presets

1 **Select the preset that you want to delete.**

See the previous section.

2 Receiver

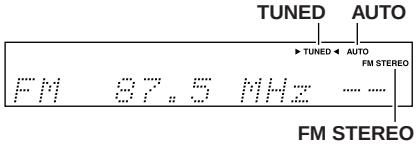


While holding down the [MEMORY] button, press the [TUNING MODE] button.

The preset is deleted and its number disappears from the display.

The North American model changes FM frequency in 0.2 MHz steps, 10 kHz steps for AM. For other models the frequency changes in 0.05 MHz steps for FM and 9 kHz (or 10 kHz) steps for AM.

When tuned into a station, the TUNED indicator appears. When tuned into a stereo FM station, the FM STEREO indicator also appears.



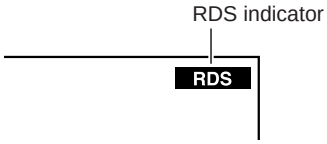
Tuning into Weak FM Stereo Stations

If the signal from a stereo FM station is weak, it may be impossible to get good reception. In this case, switch to Manual Tuning mode and listen to the station in mono.

Using RDS (European Model Only)

RDS only works with European models and only in areas where RDS broadcasts are available.

When tuned into an RDS station, the RDS indicator appears.



■ What is RDS?

RDS stands for *Radio Data System* and is a method of transmitting data in FM radio signals. It was developed by the European Broadcasting Union (EBU) and is available in most European countries. Many FM stations use it these days. In addition to displaying text information, RDS can also help you find radio stations by type (e.g., news, sport, rock, etc.).

The receiver supports four types of RDS information:

PS (Program Service)

When tuned to an RDS station that's broadcasting PS information, the station's name will be displayed.

RT (Radio Text)

When tuned to an RDS station that's broadcasting text information, the text will be shown on the display (see page 31).

PTY (Program Type)

This allows you to search for RDS radio stations by type (see page 31).

TP (Traffic Program)

This allows you to search for RDS radio stations that broadcast traffic information (see page 31).

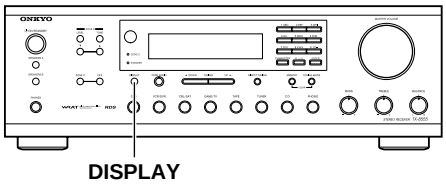
Notes:

- In some cases, the text characters displayed on the receiver may not be identical to those broadcast by the radio station. Also, unexpected characters may be displayed when unsupported characters are received. This is not a malfunction.
- If the signal from an RDS station is weak, RDS data may be displayed intermittently or not at all.

RDS Program Types (PTY)

Type	Display
None	NONE
News reports	NEWS
Current affairs	AFFAIRS
Information	INFO
Sport	SPORT
Education	EDUCATE
Drama	DRAMA
Culture	CULTURE
Science and technology	SCIENCE
Varied	VARIED
Pop music	POP M
Rock music	ROCK M
Middle of the road music	EASY M
Light classics	LIGHT M
Serious classics	CLASSICS
Other music	OTHER M
Weather	WEATHER
Finance	FINANCE
Children's programmes	CHILDREN
Social affairs	SOCIAL
Religion	RELIGION
Phone in	PHONE IN
Travel	TRAVEL
Leisure	LEISURE
Jazz music	JAZZ
Country music	COUNTRY
National music	NATION M
Oldies music	OLDIES
Folk music	FOLK M
Documentary	DOCUMENT
Alarm test	TEST
Alarm	ALARM

Displaying Radio Text (RT)



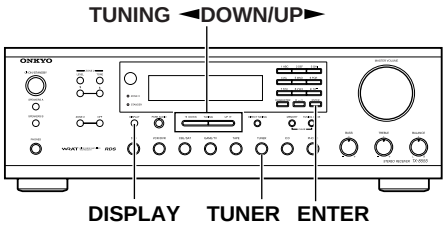
When tuned to an RDS station that's broadcasting text information, the text can be displayed.

1

Press the [DISPLAY] button once.
The RT information scrolls across the display.

Notes:
- The message "Waiting" may appear while the receiver waits for the RT information.
- If the message "No Text Data" appears on the display, no RT information is available.

Finding Stations by Type (PTY)



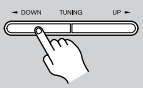
You can search for radio stations by type.

1

Use the [TUNER] input selector button.

2

Press the [DISPLAY] button twice.
The current program type appears on the display.

3 

Use the TUNING [◄ DOWN]/[UP ►] buttons to select the type of program you want.
See the table on page 30.

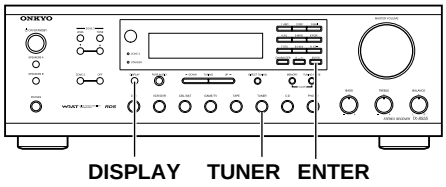
4

To start the search, press [ENTER].
The receiver searches until it finds a station of the type you specified, at which point it stops briefly before continuing with the search.

5

When a station you want to listen to is found, press [ENTER].
If no stations are found, the message "Not Found" appears.

Listening to Traffic News (TP)



You can search for stations that broadcast traffic news.

1

Use the [TUNER] input selector button.

2

Press the [DISPLAY] button three times.
If the current radio station is broadcasting TP (Traffic Program), "[TP]" will appear on the display, and traffic news will be heard as and when it's broadcast. If "TP" without square brackets appears, this means that the station is not broadcasting TP.

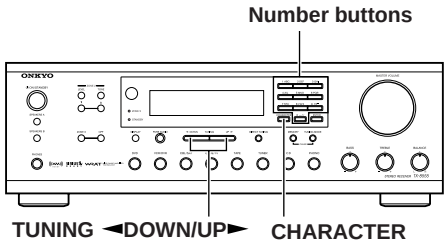
3

To locate a station that is broadcasting TP, press [ENTER].
The receiver searches until it finds a station that's broadcasting TP.
If no stations are found, the message "Not Found" appears.

Naming Preset Channels

While receiving a preset FM or AM station, a maximum of 8 characters consisting of letters, numbers and some symbols can be stored, for example to represent the station name.
You cannot assign a name to the RDS station (for European model) and the XM/SIRIUS Radio channel (for North American model).
The input display name can be changed in the same sequence as described below. (Note that changing the input display name does not change the input source.)

Characters which can be entered: A B C D E F G H I J K L M N O P Q R S T U V W X Y Z 1 2 3 4 5 6 7 8 9 0 – ␣ * /
Note: ␣ indicates a space.



Entering a Name

As an example, assume an FM station has been stored and will be given the name “ONKYO”.

1 **Select the desired preset channel.**
(Refer to “Selecting Presets” on page 29.)

2

Press the [CHARACTER] button on the front panel.
The frequency in the display goes off and the cursor (_) flashes.

3

Continue pressing the [5MNO] button until “O” is displayed.
With each press of the button, the character that appears in the display changes one at a time in the following sequence: 5 → M → N → O → 5...
If a button is not pressed within one second, the cursor automatically moves to the next position.

4 **Continue pressing number buttons to enter the desired characters.**
To enter N, press the [5MNO] button.
To enter K, press the [4JKL] button.
To enter Y, press the [9YZ-] button.

5

Press the [CHARACTER] button to store the entered characters.
If a button is not pressed within 16 seconds, the operation will end automatically.

Note:
- Press the [DISPLAY] button when you wish to check the frequency while you are entering the characters.
- To delete the name, press and hold down the [CHARACTER] button for approximately 3 seconds while displaying the name.

Correcting a Character

1 **Select the desired station.**
(Refer to “Selecting Presets” on page 29.)

2 **Press the [CHARACTER] button.**
The first character and the cursor flash alternately.

3 **Press the TUNING [◄ DOWN] or [UP ►] button to move the cursor below the character that you wish to change.**
The cursor moves to the right when the [UP ►] button is pressed and moves to the left when the [◄ DOWN] button is pressed.
Clearing all characters:
Press [DIRECT TUNING] button.

4 **Enter the desired character.**
The previous character is replaced with a new character.

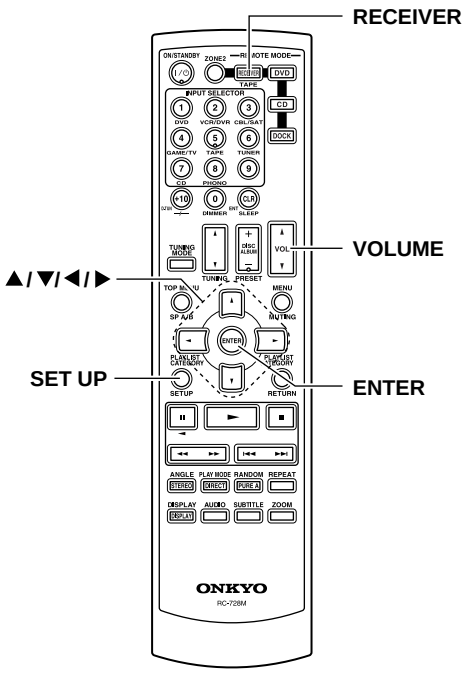
5 **Press the [CHARACTER] button.**

Advanced Setup

Setting the Advanced Setup

When you change the Advanced Setup setting, perform the procedures below.

For example: Remote ID setting procedure



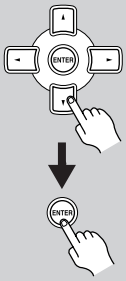
1 **Turn on the power.**

2 **Press the [RECEIVER] REMOTE MODE button, followed by the SETUP button on the remote controller.**

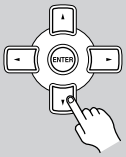
The setup menu appears in the display.

3 **Use the Up and Down [▲]/[▼] buttons to select "1. Hardware set," and then press [ENTER].**

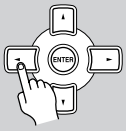
The Hardware setup menu appears in the display.



4 **Use the Up and Down [▲]/[▼] buttons to select "Remote ID: 1" indication.**



5 **Change the Remote ID to "3" using the Left and Right [◀]/[▶] buttons.**



6 **Press the SETUP button on the remote controller to complete the setting.**

Advanced Setup Menu

1.Hardware set

Remote ID

When several Onkyo components are used in the same room, their remote ID codes may overlap. To differentiate the receiver from the other components, you can change its remote ID from 1, the default, to 2 or 3.

Note:

- If you do change the receiver's remote ID, be sure to change the remote controller to the same ID, otherwise, you won't be able to control it with the remote controller.

Impedance

See page 15.

Z2 Out

See page 36.

2.Intelli Vol

With IntelliVolume, you can set the input level for each input selector individually. This is useful if one of your source components is louder or quieter than the others. Use the Left and Right [◀]/[▶] buttons to set the level. If a component is noticeably louder than the others, use the Left [◀] button to reduce its input level. If it's noticeably quieter, use the Right [▶] button to increase its input level. The input level can be adjusted from -12 dB to +12 dB in 1 dB steps.

3.Volume Setup

Volume Disp (Volume Display)

With this setting, you can select the Abs (Absolute) or Rel (Relative) volume display mode.

Muting Lvl (Muting Level)

With this setting, you can set the Muting Level.

The range is -∞dB, -50dB, -40dB, -30dB, -20dB, -10dB.

MaxVolume (Maximum Volume)

With this setting, you can limit the maximum volume.

The Maximum Volume range is Off, 79 to 30.

Pow On Vol (Power On Volume)

This setting determines the volume level applied each time the receiver is turned on.

The range is Last, Min, 1 to 79, Max.

To use the same volume level as when the receiver was last turned off, select Last.

Note:

- The Power On Volume setting cannot be set higher than the Maximum Volume setting.

Z2MaxVol (Zone 2 Maximum Volume)

With this setting, you can limit the maximum volume for Zone 2.

The Maximum Volume range is Off, 79 to 30.

Z2POnVol (Zone 2 Power On Volume)

This setting determines the volume level applied for Zone 2 each time the receiver is turned on.

The range is Last, Min, 1 to 79, Max.

To use the same volume level as when the receiver was last turned off, select Last.

4.Tuner Setup

See "Using XM/SIRIUS Satellite Radio."

5.Lock Setup

With this setting, you can protect your settings by locking the setup menus.

Locked: Setup menus locked.

Unlocked: Setup menus unlocked.

When Locked is selected, only this Lock Setup item can be accessed.

Changing the Remote Controller's ID

1

While holding down the [RECEIVER] REMOTE MODE button, press and hold down the [SUBTITLE] button until the REMOTE MODE button lights up (about 3 seconds).

2

Use the number buttons to enter ID 1, 2, or 3.

The [RECEIVER] REMOTE MODE button flashes twice.

If programming fails, the button flashes once. Repeat steps 1 and 2.

Zone 2

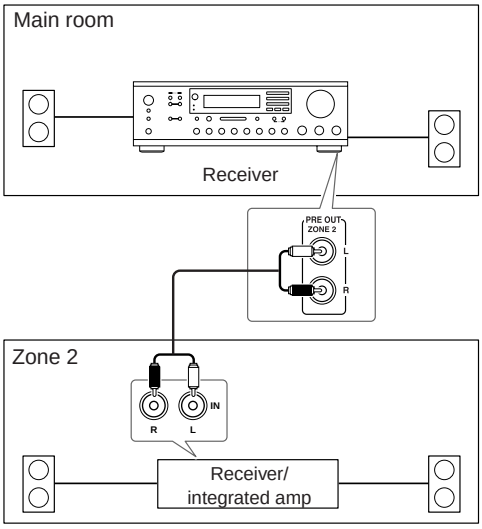
In addition to your main listening room, you can also enjoy playback in the other room, or as we call Zone 2. And, you can select a different source for each room.

Connecting Zone 2

This setup allows 2-channel playback (with the speaker set A and B) in your main listening room and 2-channel stereo playback in Zone 2, with a different source in each room.

Hookup

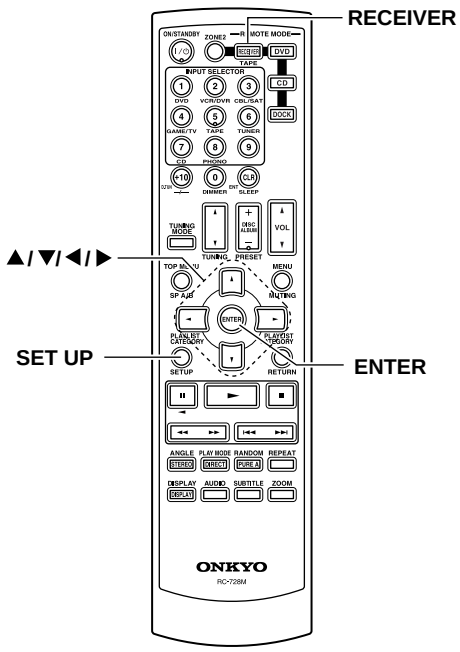
- Use an RCA audio cable to connect the receiver's ZONE 2 PRE OUT L/R jacks to an analog audio input on your Zone 2 amp.
- Connect your Zone 2 speakers to the speaker terminals on your Zone 2 amp.



Notes:

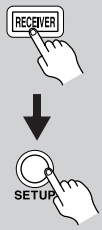
- The Zone 2 volume must be set on the Zone 2 amp.
- If you're using a power amp with no volume control in Zone 2, you must set the Zone 2 Out setting to Variable (see page 36).

Zone 2 Out Settings



If you have connected your Zone 2 speakers to an amp with no volume control, set the Zone 2 Out setting to Variable so that you can set the zone's volume, balance, and tone on the receiver.

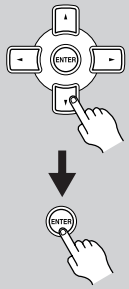
1



Press the [RECEIVER] Remote Mode button, followed by the [SETUP] button.

The setup menu appears on the display.

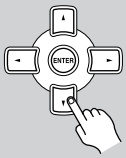
2



Use the Up and Down [▲]/[▼] buttons to select "1. Hardware set," and then press [ENTER].

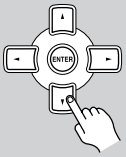
The Hardware Setup menu appears.

3



Use the Up and Down [▲]/[▼] buttons to select "Z2 Out: Fixed."

4



Use the Left and Right [◀]/[▶] buttons to select:

Fixed: The Zone 2 volume must be set on the amp in that zone.

Variable: The Zone 2 volume can be set on the receiver.

5

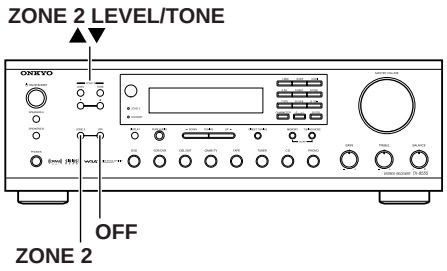
Press the [SETUP] button.

Setup closes.

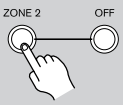
Using Zone 2

This section explains how to turn Zone 2 on and off, how to select an input source for Zone 2, and how to adjust the volume for Zone 2.

Controlling Zone 2 from the receiver



1



To turn on Zone 2 and select an input source, press the [ZONE 2] button repeatedly.

Alternatively, press the [ZONE 2] button followed by an input selector button within 8 seconds.

Zone 2 turns on and ZONE 2 indicator lights up.

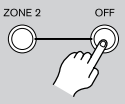
To select the same source as that of the main room, press the [ZONE 2] button repeatedly until "Zone 2 Sel: Source" appears.

To select AM or FM, press the [TUNER] Input Selector button repeatedly. On the North American model, you can also select XM/SIRIUS.

Note:

- You cannot select different AM or FM radio stations for your main room and Zone 2. The same AM/FM radio station will be heard in each room.

2

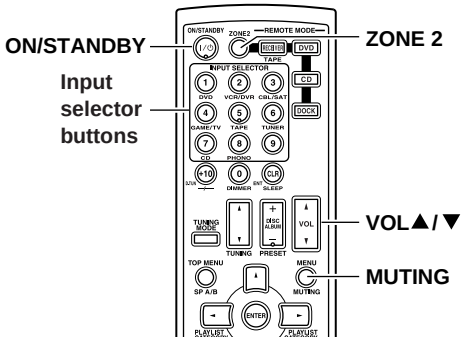


To turn off Zone 2, press the Zone 2 [OFF] button.

Notes:

- While Zone 2 is on, the Auto Power On/Standby and Direct Change RI functions do not work.
- When you control Zone 2 with the remote controller while main room is standby, the display doesn't work.

Controlling Zone 2 with the Remote Controller

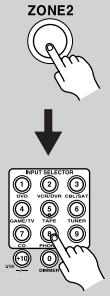


1

Press the [ZONE 2] button, then point the remote controller at the receiver and press the [ON/STANDBY] button.

Zone 2 turns on and ZONE 2 indicator lights up.

2



To select an input source for Zone 2, press the [ZONE 2] button, followed by an Input Selector button.

To select AM or FM press the [TUNER] Input Selector button repeatedly. On the North American model, you can also select XM/SIRIUS.

Note:

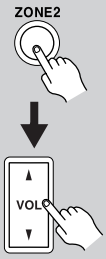
- You cannot select different AM or FM radio stations for your main room and Zone 2. The same AM/FM radio station will be heard in each room.

3

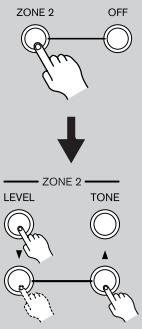
To turn off Zone 2, press the [ZONE 2] button, followed by the [ON/STANDBY] button.

Note:
- To control Zone 2, you must press the remote controller's [ZONE 2] button first.

Adjusting the Volume of Zone 2

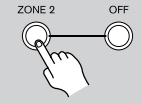
1 

On the remote controller, press the [ZONE 2] Remote Mode button, and then use the VOL [▲]/[▼] buttons.

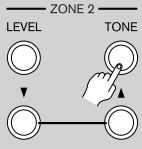


On the receiver, press the [ZONE 2] button, and then use the Up and Down [▲]/[▼] buttons.

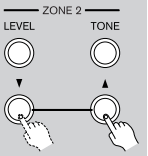
Adjusting the Balance of Zone 2

1 

On the receiver, press the [ZONE 2] button.

2 

Press the receiver's [TONE] button repeatedly to select Balance.

3 

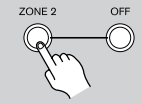
Use the Up and Down [▲]/[▼] buttons to adjust the balance.
You can adjust the balance from 0 in the center to +12 dB to the right or +12 dB to the left in 2 dB steps.

Muting Zone 2

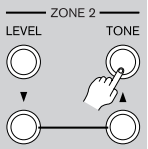
On the remote controller, press the [ZONE 2] Remote Mode button, and then press the [MUTING] button.

To unmute a zone, on the remote controller, press the [ZONE 2] Remote Mode button, and then press the [MUTING] button again.

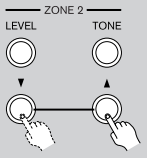
Adjusting the Tone of Zone 2

1 

On the receiver, press the [ZONE 2] button.

2 

Press the receiver's [TONE] button repeatedly to select Bass or Treble.

3 

Use the Up and Down [▲]/[▼] buttons to adjust the bass or treble.
You can boost or cut the Bass or Treble from -12 to +12 in 2 steps.

Notes:
- Zone 2 can also be unmuted by adjusting the volume.
- The Zone 2 level, balance, and tone functions have no effect on the ZONE 2 PRE OUT when the Zone 2 Out setting is set to Fixed (page 36).

Connecting Components not Reached by the Remote Controller Signals (IR IN/OUT)

In order to use the remote controller to control the receiver from a remote location, you will need to prepare a multiroom kit (sold separately) such as one listed below:

- Multiroom A/V distribution and control system such as those from Niles® and Xantech®

* Xantech is a registered trademark of Xantech Corporation.

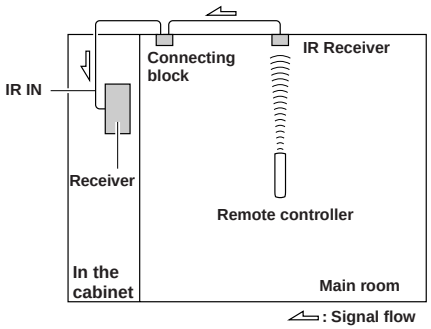
* Niles is a registered trademark of Niles Audio Corporation.

If Remote Controller Signal Does not Reach the Receiver Remote Sensor

Effective Sensor Layout

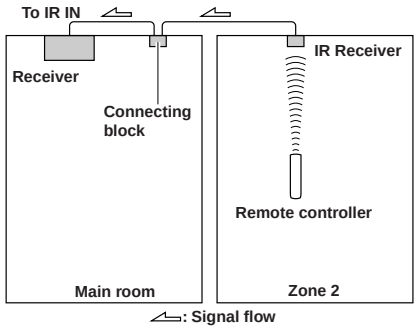
Example for the main room

If the receiver is located inside a cabinet or other enclosure where the infrared rays from the remote controller cannot enter, then operation with the remote controller will not be possible. In such a case, it will be necessary to install a remote sensor at a location outside of the cabinet so that the infrared rays from the controller can be sensed.



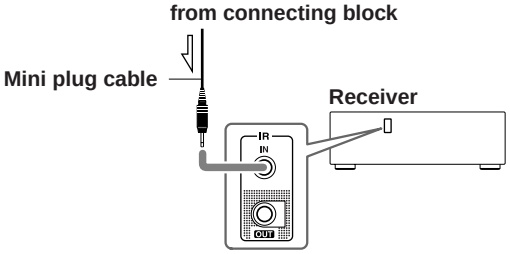
Example for Zone 2

The IR IN input allows you to control the receiver from Zone 2 with the remote controller even though Zone 2 may be on the other side of the building from the main zone. The diagram below shows how to make the proper connections for Zone 2.



Making Sensor Connections

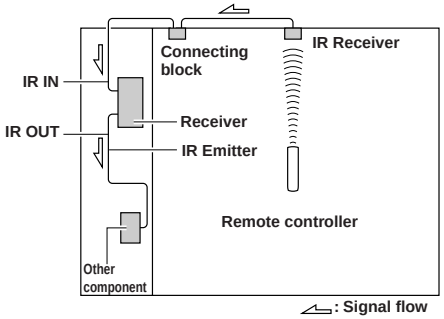
When you place the IR receiver in the main room, connect the cable from the connecting block to the IR IN terminal. Make the connection as shown below. Do not plug any equipment into the power outlet until all the connections are complete.



If Remote Controller Signal Does not Reach Other Components

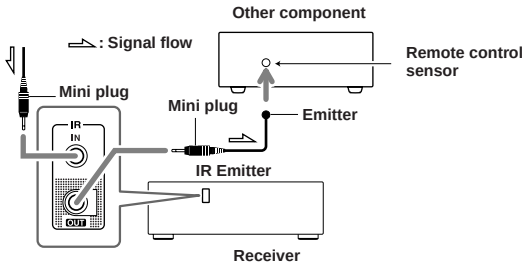
Effective Sensor Layout

In this situation, you will need to use a commercially available IR emitter. Connect the mini plug of the IR emitter to the IR OUT terminal on the receiver and then place the IR emitter on the remote sensor of the component or facing it. When the IR emitter is connected, only the signal input to the IR IN terminal is output to the IR OUT terminal. The signal input from the remote sensor on the front of the receiver will not be output to the IR OUT terminal.



Making Sensor Connections

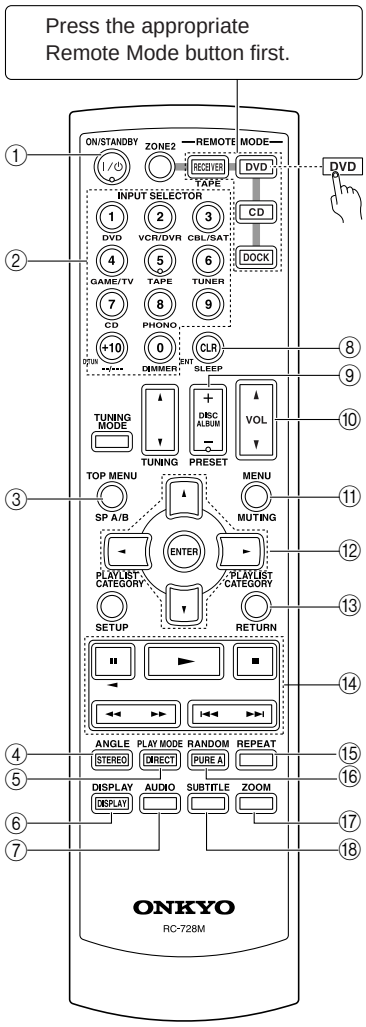
The IR emitter should be connected to the receiver's IR OUT Terminal, as shown below.



Controlling Other Components

Controlling an Onkyo DVD Player

The [DVD] Remote Mode button is preprogrammed with the remote control code for controlling an Onkyo DVD player.



* With some components, certain buttons may not work as expected, and some may not work at all.

① **ON/STANDBY button**
Sets the DVD player to On or Standby.

② **Number buttons**
Used to enter title, chapter, and track numbers, and to enter times for locating specific points. The [+10] button works as a +10 button or "-.--" button.

③ **TOP MENU button**
Displays a DVD's top menu or a DVD's title.

④ **ANGLE button**
Selects the view angle.

⑤ **PLAY MODE button**
Selects play modes on components with selectable play modes.

⑥ **DISPLAY button**
Displays information about the current disc, title, chapter, or track, including elapsed time, remaining time, total time, and so on.

⑦ **AUDIO button**
Selects foreign language soundtracks and audio formats (e.g., Dolby Digital or DTS).

⑧ **CLR button**
Cancels functions and clears entered numbers.

⑨ **DISC +/–, button**
Selects discs on a DVD changer.

⑩ **VOL [▲]/[▼] button (23)**
Adjusts the volume of the AV receiver.

⑪ **MENU button**
Displays a DVD's menu.

⑫ **Arrow [▲]/[▼]/[◄]/[►] and ENTER buttons**
Used to navigate menus and select items.

⑬ **RETURN button**
Exits the DVD player's setup menu or returns to the previous menu.

⑭ **Playback buttons**
From left to right and top to button : Pause, Play, Stop, Rewind, Fast Forward, Previous, and Next.

⑮ **REPEAT button**
Used with the repeat playback function.

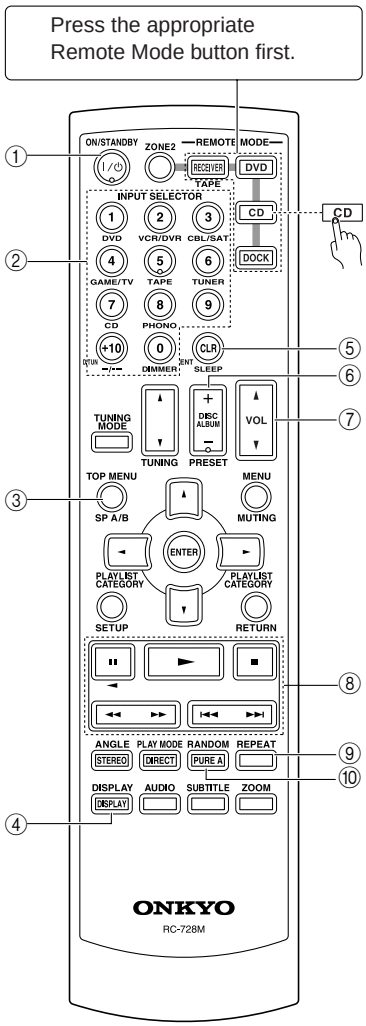
⑯ **RANDOM button**
Used with the random playback function.

⑰ **ZOOM button**
Used with the zoom playback function.

⑱ **SUBTITLE button**
Displays a DVD's subtitle.

Controlling an Onkyo CD Player

The [CD] Remote Mode button is preprogrammed with the remote control code for controlling an Onkyo CD player.



* With some components, certain buttons may not work as expected, and some may not work at all.

① **ON/STANDBY button**
Set the component to On or Standby.

② **Number buttons**
Used to enter track numbers and times for locating specific points. The [+10] button works as a +10 button or "-.--" button.

③ **TOP MENU button**
Displays a menu.

④ **DISPLAY button**
Displays information about the current disc or track, including elapsed time, remaining time, total time, and so on.

⑤ **CLR button**
Cancels functions and clears entered numbers.

⑥ **DISC +/– button**
Selects discs on a CD changer.

⑦ **VOL [▲]/[▼] button (23)**
Adjusts the volume of the AV receiver.

⑧ **Playback buttons**
From left to right and top to button : Pause, Play, Stop, Rewind, Fast Forward, Previous, and Next.

⑨ **REPEAT button**
Used with the repeat playback function.

⑩ **RANDOM button**
Used with the random playback function.

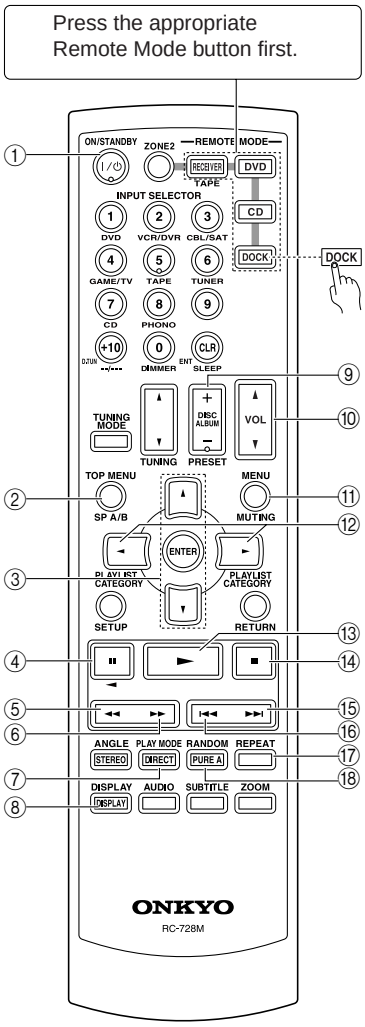
Controlling an RI Dock

By pressing the Remote Mode button that has been programmed with the remote control code for your RI Dock, you can control your iPod in the RI Dock with the following buttons.

The [DOCK] Remote Mode button is preprogrammed with the remote control code for controlling an Onkyo RI Dock.

When Using an RI Dock:

- Connect the RI Dock to the TAPE IN or VCR/DVR IN L/R jacks.
- Set the RI Dock's RI MODE switch to HDD or HDD/DOCK.
- See the RI Dock's instruction manual for more information.



* With some components, certain buttons may not work as expected, and some may not work at all.

① **ON/STANDBY button**
Turns the iPod on or off.

Notes:

- This button does not turn the Onkyo DS-A2 or DS-A2X RI Dock on or off.
- Your iPod may not respond the first time you press this button, in which case you should press it again. This is because the remote controller transmits the On and Standby commands alternately, so if your iPod is already on, it will remain on when the remote controller transmits an On command. Similarly, if your iPod is already off, it will remain off when the remote controller transmits an Off command.

② **TOP MENU button**
Works as a Mode button when used with a DS-A2 RI Dock.

③ **Arrow [▲]/[▼] and ENTER buttons***
Used to navigate menus and select items.

④ **Pause [❙❙] button**
Pauses playback. (With 3rd generation iPod models, it works as a Play/Pause button.)

⑤ **Rewind [◄◄] button**
Press and hold to rewind

⑥ **Fast Forward [►►] button**
Press and hold to fast forward.

⑦ **PLAY MODE button**
Selects play modes on components with selectable play modes.

Works as a Resume button when used with a DS-A2 RI Dock.

⑧ **DISPLAY button***
Turns on the backlight for 30 seconds.

⑨ **ALBUM +/– button***
Selects the next or previous album.

⑩ **VOL [▲]/[▼] button (23)**
Adjusts the volume of the AV receiver.

⑪ **MENU button***
Displays a menu.

⑫ **PLAYLIST [◄]/[►] buttons***
Selects the previous or next playlist on the iPod.

⑬ **Play [►] button**
Starts playback. If the component is off, it will turn on automatically. (With 3rd generation iPod models, this button works as a Play/Pause button.)

⑭ **Stop [■] button**
Stops playback and displays a menu.

⑮ **Next [►►I] button**
Selects the next song.

⑯ **Previous [⏮] button**
Restarts the current song. Press it twice to select the previous song.

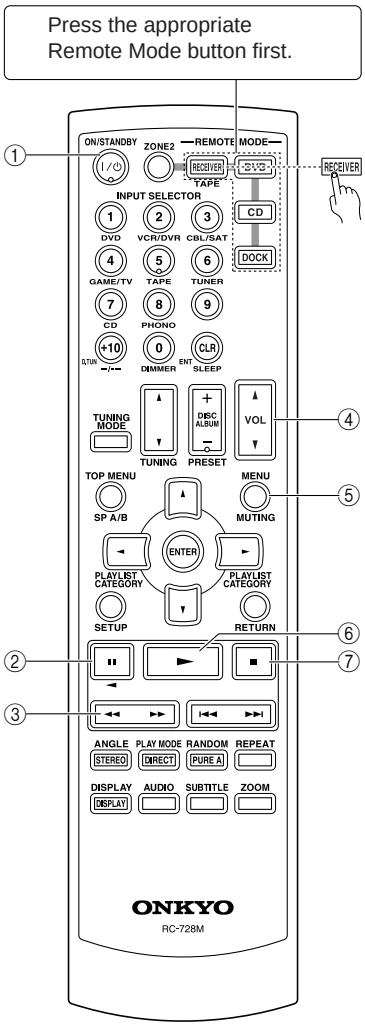
⑰ **REPEAT button***
Used with the repeat function.

⑱ **RANDOM button***
Used with the shuffle function.

* Buttons marked with an asterisk (*) are not supported by 3rd generation iPod models.

Controlling a Cassette Recorder

An Onkyo cassette recorder connected via RI can be controlled in Receiver mode.



* With some components, certain buttons may not work as expected, and some may not work at all.

On twin cassette decks, only Deck B can be controlled.

① **ON/STANDBY button**
Turns the cassette recorder on or off.

② **Reverse Play [◀] button**
Starts reverse playback.

③ **Rewind and Fast Forward [◀◀]/[▶▶] buttons**
The Rewind [◀◀] button starts rewind. The Fast Forward [▶▶] button starts fast forward.

④ **VOL [▲]/[▼] button (23)**
Adjusts the volume of the AV receiver.

⑤ **Muting button (24)**
Mutes or unmutes the AV receiver.

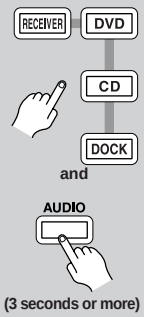
⑥ **Play [▶] button**
Starts playback.

⑦ **Stop [■] button**
Stops playback.

Programming a remote control code for controlling components connected via RI

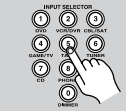
By default, the [DVD], [CD], and [DOCK] REMOTE MODE buttons have been programmed with the remote control codes for controlling Onkyo products. To control the components connected via RI, follow the steps below to program the appropriate remote control code for the component to be used.

1



Press and hold the [DVD], [CD], or [DOCK] REMOTE MODE button along with the [AUDIO] button for more than three seconds.

2



Select an appropriate 4-digit code from the list provided below, and then enter the code using the number buttons while the REMOTE MODE button is lit (for approximately 30 seconds).

When a correct code is entered:

The REMOTE MODE button quickly flashes twice, and programming completes.

When an incorrect code is entered or an incorrect button is pressed:

The REMOTE MODE button flashes once, and programming fails. Repeat steps 1 and 2.

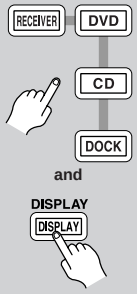
Remote control codes for controlling components connected via RI:

[DVD]: 5002 (5001 by default)
[CD]: 6002 (6001 by default)
[DOCK]: 9002 (9001 by default)

Resetting the REMOTE MODE Buttons

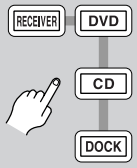
You can reset a REMOTE MODE button to its default remote control code.

1



While holding down the REMOTE MODE button that you want to reset, press and hold down the [DISPLAY] button until the button REMOTE MODE button lights up (about 3 seconds).

2



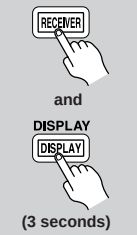
Press the REMOTE MODE button again.

The REMOTE MODE button flashes twice, indicating that the button has been reset. Each REMOTE MODE button is preprogrammed with a remote control code. When a button is reset, its preprogrammed code is restored.

Resetting the Remote Controller

You can reset the remote controller to its default settings.

1



While holding down the [RECEIVER] REMOTE MODE button, press and hold down the [DISPLAY] button until the REMOTE MODE button lights up (about 3 seconds).

2

Within 30 seconds, press the [RECEIVER] REMOTE MODE button again.

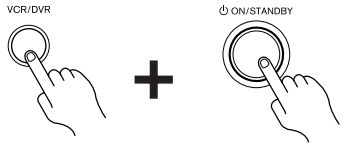
The REMOTE MODE button flashes twice, indicating that the remote controller has been reset.

Troubleshooting

If you have any trouble using the receiver, look for a solution in this section.

If you can't resolve the issue yourself, try resetting the receiver before contacting your Onkyo dealer.

To reset the receiver to its factory defaults, turn it on and, while holding down the [VCR/DVR] button, press the [ON/STANDBY] button.



Note that resetting the receiver will delete your radio presets and custom settings.

Power

Can't turn on the receiver

- Make sure that the power cord is plugged into the wall outlet properly.
- Unplug the power cord from the wall outlet, wait 5 seconds or more, then plug it in again.

The STANDBY indicator is flashing

- The amp protection circuit has been activated. Remove the power cord from the wall outlet immediately. Disconnect all speaker cables and input sources, and leave the receiver with its power cord disconnected for 1 hour. After that, reconnect the power cord and press the [ON/STANDBY] button again. If you can not resolve the problem, contact your Onkyo dealer.

Audio

There's no sound or it's very quiet

- Make sure the speaker set A or B is on (page 23).
- Make sure that all audio connecting plugs are pushed in all the way (pages 13-21).
- Make sure that the polarity of the speaker cables is correct, and that the bare wire is in contact with metal part of each speaker terminal (page 13).
- Make sure that the speaker cables are not shorting.
- Make sure that the inputs and outputs of all components are connected properly.
- Make sure that the correct input source is selected (page 23).
- If the MUTING indicator is shown on the display, press the remote controller's [MUTING] button to unmute the receiver (page 24).
- If your turntable uses an MC cartridge, you must connect an MC head amp, or an MC transformer and a phono preamp.

Noise can be heard

- Using cable ties to bundle audio cables with power cords, speaker cables, and so on may degrade the audio performance, so don't do it.
- An audio cable may be picking up interference. Try repositioning your cables.

The tone controls have no effect

- If the DIRECT indicator or PURE AUDIO indicator lights up, the tone controls have no effect (page 25).

Tuner

Reception is noisy, stereo FM reception suffers from hiss, or the FM STEREO indicator doesn't appear

- Relocate your antenna.
- Move the receiver away from your TV or computer.
- Listen to the station in mono (page 29).
- When listening to an AM station, operating the remote controller may cause noise.
- Passing cars and airplanes can cause interference.
- Concrete walls weaken radio signals.
- If nothing improves the reception, install an outdoor antenna.

Remote Controller

The remote controller doesn't work

- Make sure that the batteries are installed with the correct polarity (page 6).
- Install new batteries. Don't mix different types of batteries or old and new batteries (page 6).
- Make sure that the remote controller is not too far away from the receiver, and that there's no obstruction between the remote controller and the receiver's remote control sensor (page 12).
- Make sure that the receiver is not subjected to direct sunshine or inverter-type florescent lights. Relocate if necessary (page 12).

Can't control other components

- If you have connected an RI-capable Onkyo Remote Interactive Dock to the TAPE IN or VCR/DVR IN jacks for the remote controller to work properly, you must set the input display to HDD (see page 22).
- If it is an Onkyo component, make sure that the RI cable and analog audio cable are connected properly. Connecting only an RI cable won't work (page 20).
- With some components, certain buttons may not work as expected, and some may not work at all.
- To control an Onkyo component that's connected via RI, point the remote controller at the receiver.

Recording

Can't record

- On your recorder, make sure the correct input is selected.
- To prevent signal loops and damage to the receiver, input signals are not fed through to outputs with the same name (e.g., TAPE IN to TAPE OUT, or VCR/DVR IN to VCR/DVR OUT).
- When the Pure Audio function is selected, recording is not possible because no video signals are output. Disable the function before recording.

Others

The display doesn't work

- The display is turned off when the Pure Audio function is selected.

The RI functions don't work

- To use RI, you must make an RI connection and an analog audio connection (RCA) between the component and receiver, even if they are connected digitally (page 20).
- While Zone 2 is selected, the RI functions don't work.

The receiver contains a microcomputer for signal processing and control functions. In very rare situations, severe interference, noise from an external source, or static electricity may cause it to lockup. In the unlikely event that this happens, unplug the power cord from the wall outlet, wait at least five seconds, and then plug it back in again.

Onkyo is not responsible for damages (such as CD rental fees) due to unsuccessful recordings caused by the unit's malfunction. Before you record important data, make sure that the material will be recorded correctly.

Before disconnecting the power cord from the wall outlet, set the receiver to Standby.

Memory Backup
The receiver uses a battery-less memory backup system in order to retain radio presets and other settings when it's unplugged or in the case of a power failure. Although no batteries are required, the receiver must be plugged into an AC outlet in order to charge the backup system. Once it has been charged, the receiver will retain the settings for several weeks, although this depends on the environment and will be shorter in humid climates.

Specifications

Amplifier Section

Rated Output Power (FTC) (North American)

All channels: **100 watts minimum continuous power per channel, 8 ohm loads, 2 channels driven from 20 Hz to 20 kHz, with a maximum total harmonic distortion of 0.08 %**

Rated Output Power (IEC) (European and Australian)
2 ch × 125 W at 4 ohms, 1 kHz, 1 ch driven

Maximum Output Power (JEITA) (Asian)
130 W at 4 ohms, 1 kHz, 2 ch driven

Dynamic Power
North American:
230 W + 230 W (4 Ω)
170 W + 170 W (6 Ω)
145 W + 145 W (8 Ω)
European and Australian:
145 W + 145 W (2 Ω)
120 W + 120 W (4 Ω)
75 W + 75 W (8 Ω)

THD (Total Harmonic Distortion): 0.08 % (Power Rated)/ 0.08 % (1 kHz, 1 W)

Damping Factor: 60 (Front, 1 kHz, 8 Ω)

Input Sensitivity and Impedance: 150 mV/ 50 kΩ (LINE)
2.5 mV/ 50 kΩ (PHONO MM)

Output Level and Impedance: 150 mV/ 2.2 kΩ (REC OUT)

Frequency Response: 10 Hz–100 kHz/ +1 dB–3 dB (CD)

Tone Control: ±10 dB, 100 Hz (BASS)
±10 dB, 10 kHz (TREBLE)

Signal to Noise Ratio: 100 dB (LINE, IHF-A)
80 dB (PHONO, IHF-A)

Speaker Impedance: 4 Ω–16 Ω

Video Section

Input Sensitivity/Output Level and Impedance: 1 Vp-p /75Ω (Composite)

Tuner Section

■ FM

Tuning Frequency Range: North American: 87.5 MHz– 107.9 MHz
Others: 87.5 MHz– 108.0 MHz

■ AM

Tuning Frequency Range: North American: 530 kHz–1710 kHz
Others: 522 kHz–1611 kHz

Preset Channel: 40

General

Power Supply: North American: AC 120 V, 60 Hz
European and Australian: AC 230-240 V, 50 Hz

Power Consumption: North American: 2.8 A
European and Australian: 220 W

Standby Power Consumption: North American: 0.2 W
European and Australian: 0.3 W

Dimensions (W × H × D): 435 × 149 × 340 mm
17-1/8" × 5-7/8" × 13-3/8"

Weight: North American: 8.5 kg
18.7 lbs.
European and Australian: 8.5 kg
18.7 lbs.

■ Video Inputs

Composite: DVD, VCR/DVR, CBL/SAT, GAME/TV

■ Video Outputs

Composite: MONITOR OUT, VCR/DVR

■ Audio Inputs

Analog Inputs: PHONO, CD, TAPE, GAME/TV, CBL/SAT, DVD, VCR/DVR

■ Audio Outputs

Analog Outputs: TAPE, VCR/DVR
Speaker Outputs: SPEAKERS A
SPEAKERS B
Phones: 1

■ Control Terminal

IR Input/Output: 1/1

Specifications and features are subject to change without notice.

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